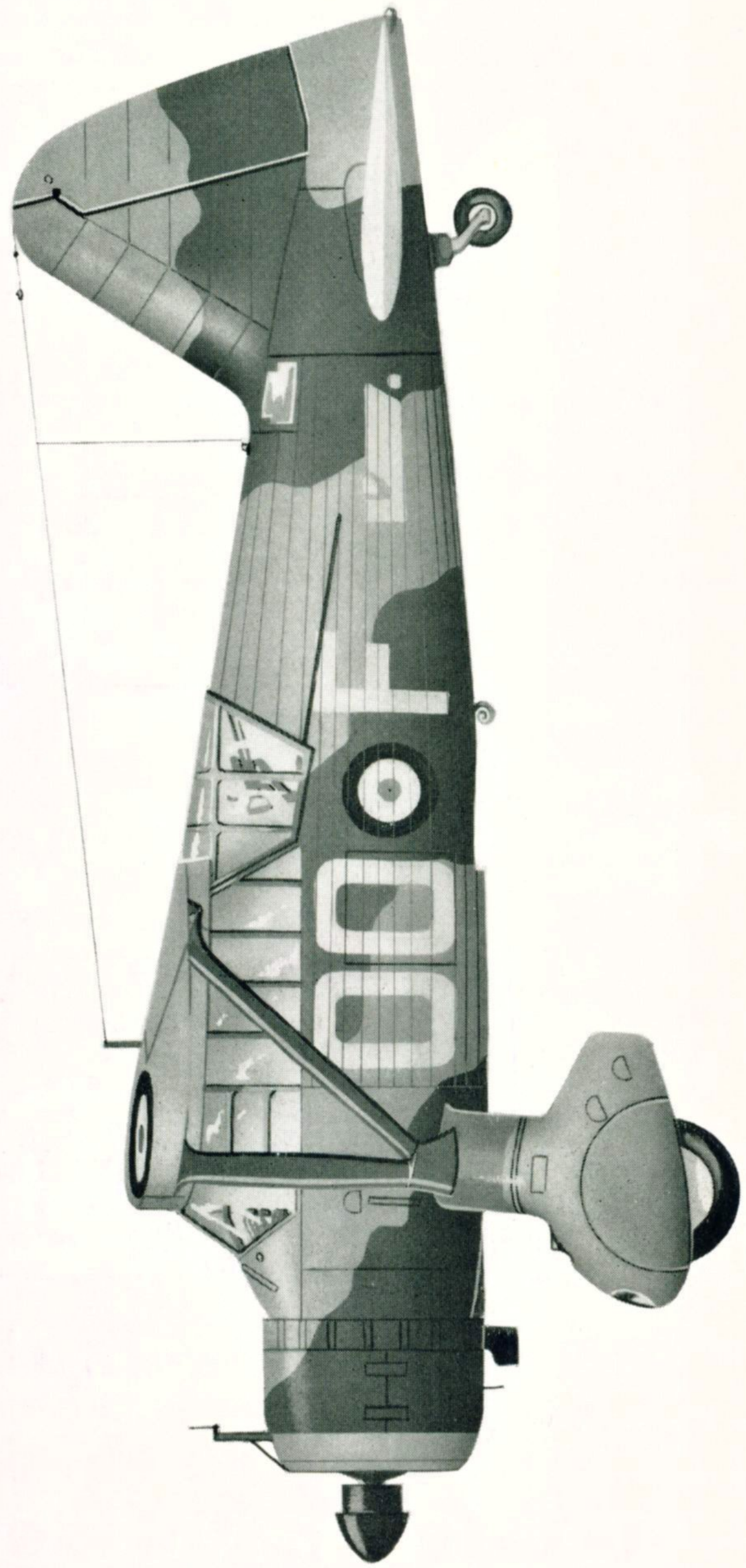
PROFILE PUBLICATIONS

The Westland Lysander



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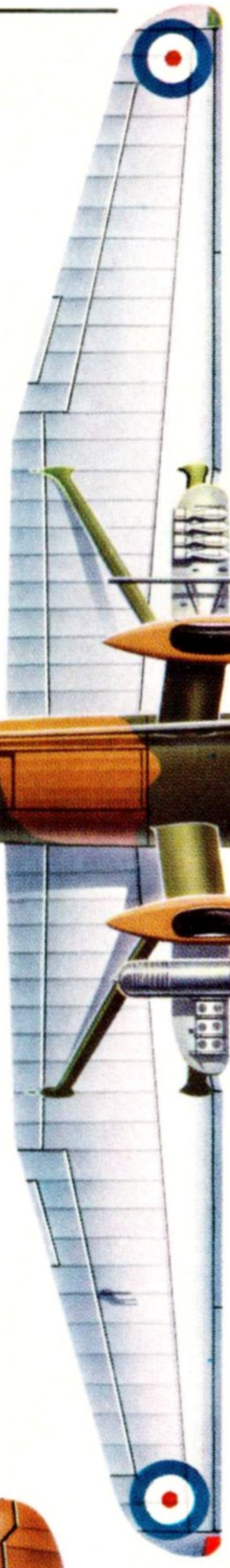
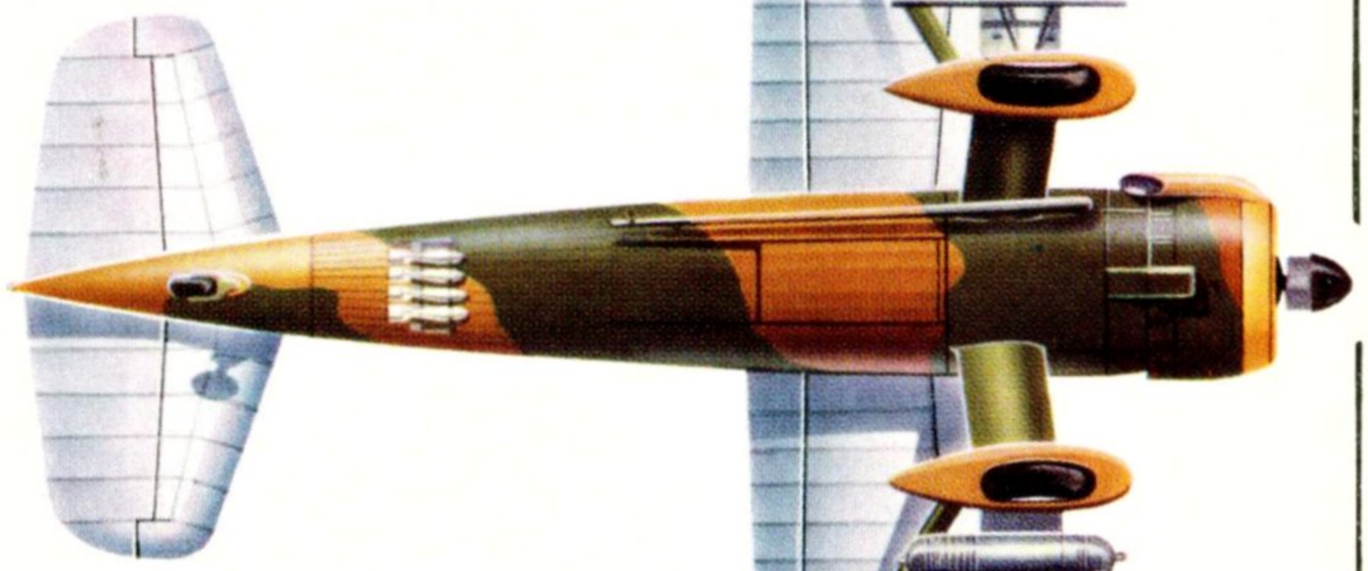
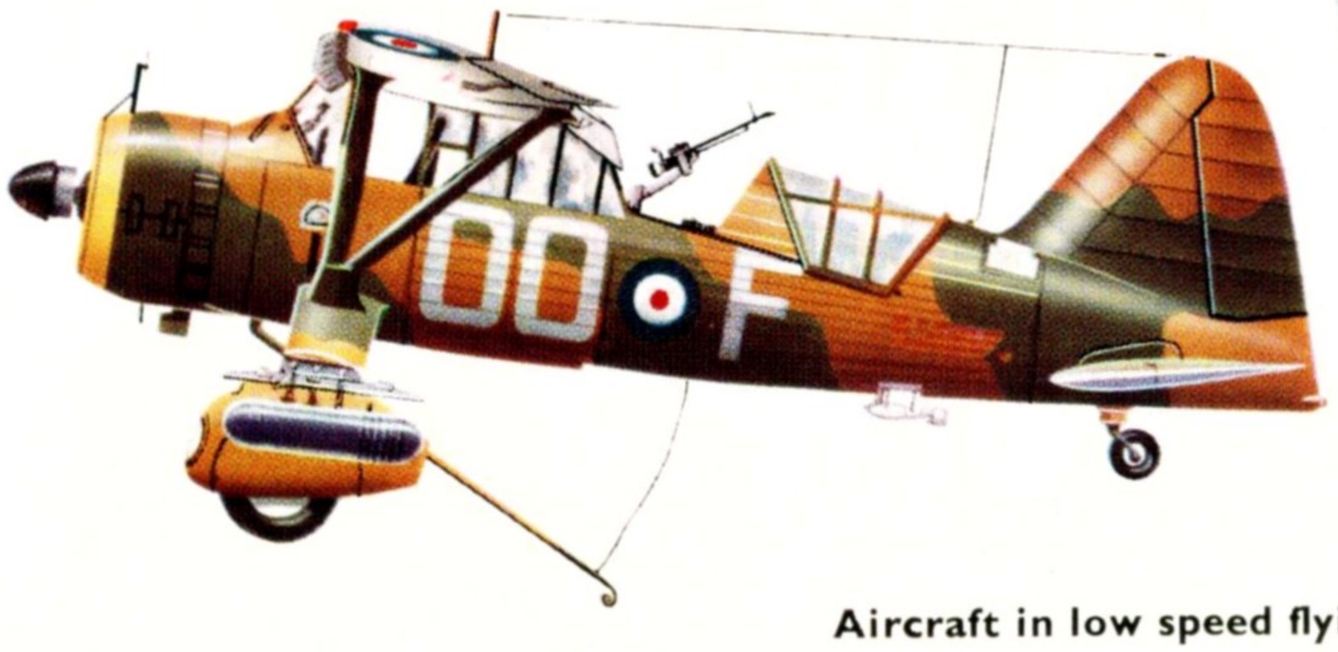
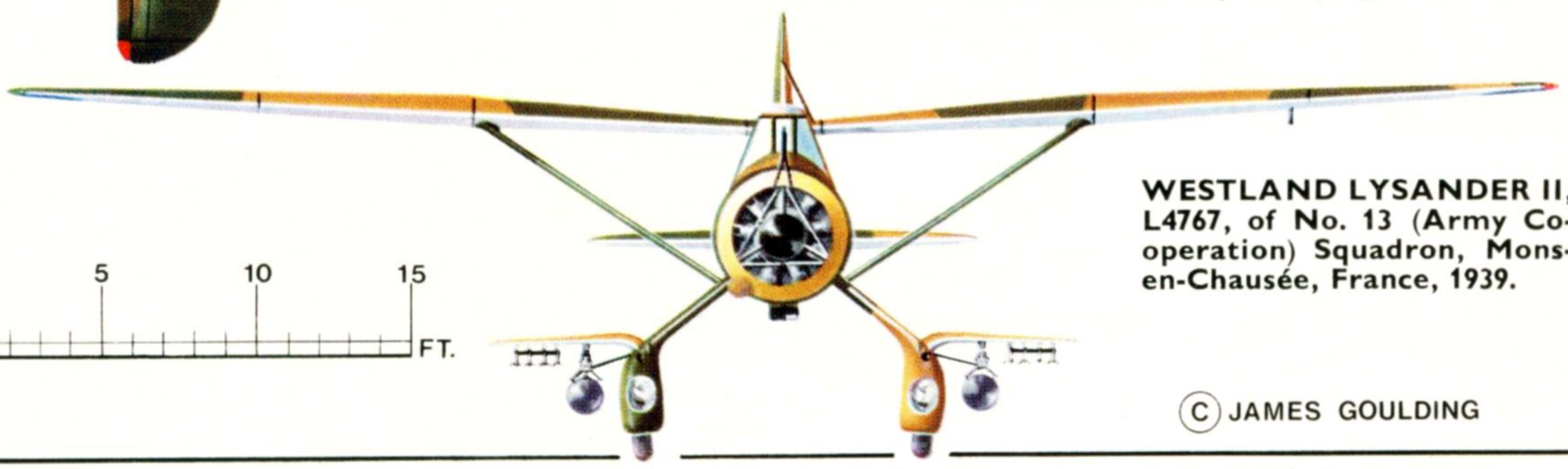
Aircraft with stub wings removed.

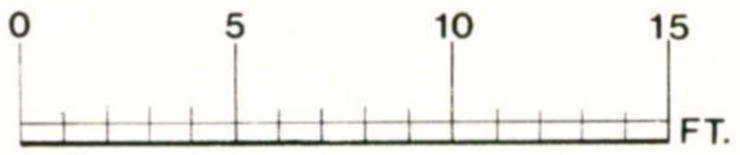






Aircraft in low speed flying attitude.



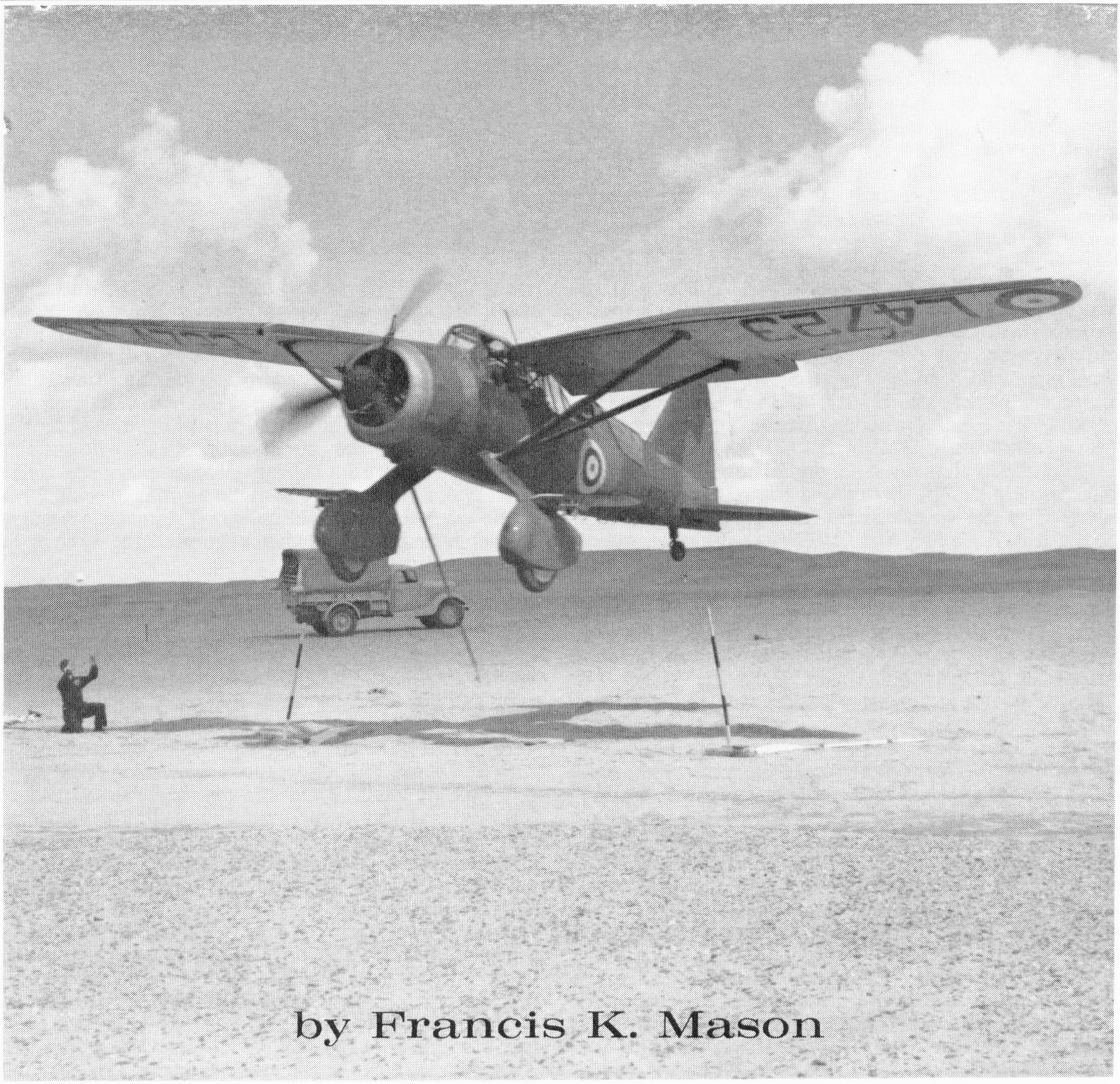


WESTLAND LYSANDER II, L4767, of No. 13 (Army Co-operation) Squadron, Mons-en-Chausée, France, 1939.

© JAMES GOULDING

The obliteration of the aircraft's serial number was carried out in red primer in accordance with Air Staff Instructions during October 1939, not, as occasionally stated, on the negative of contemporary photographs.

In 1941 a notice hung in a Royal Observer Corps training centre at Oxford: "There is a difference between a barrage balloon, an aeroplane and a Lysander; the aeroplane can't stand still in the air—which makes it difficult to identify". This ably summed up the Lysander, its remarkable low speed capabilities and its singular appearance.



A No. 208 (AC) Squadron Lysander I on a message pick-up training flight near Ismailia, Egypt, shortly before the outbreak of World War II. (Photo: via Westland Aircraft Ltd.)

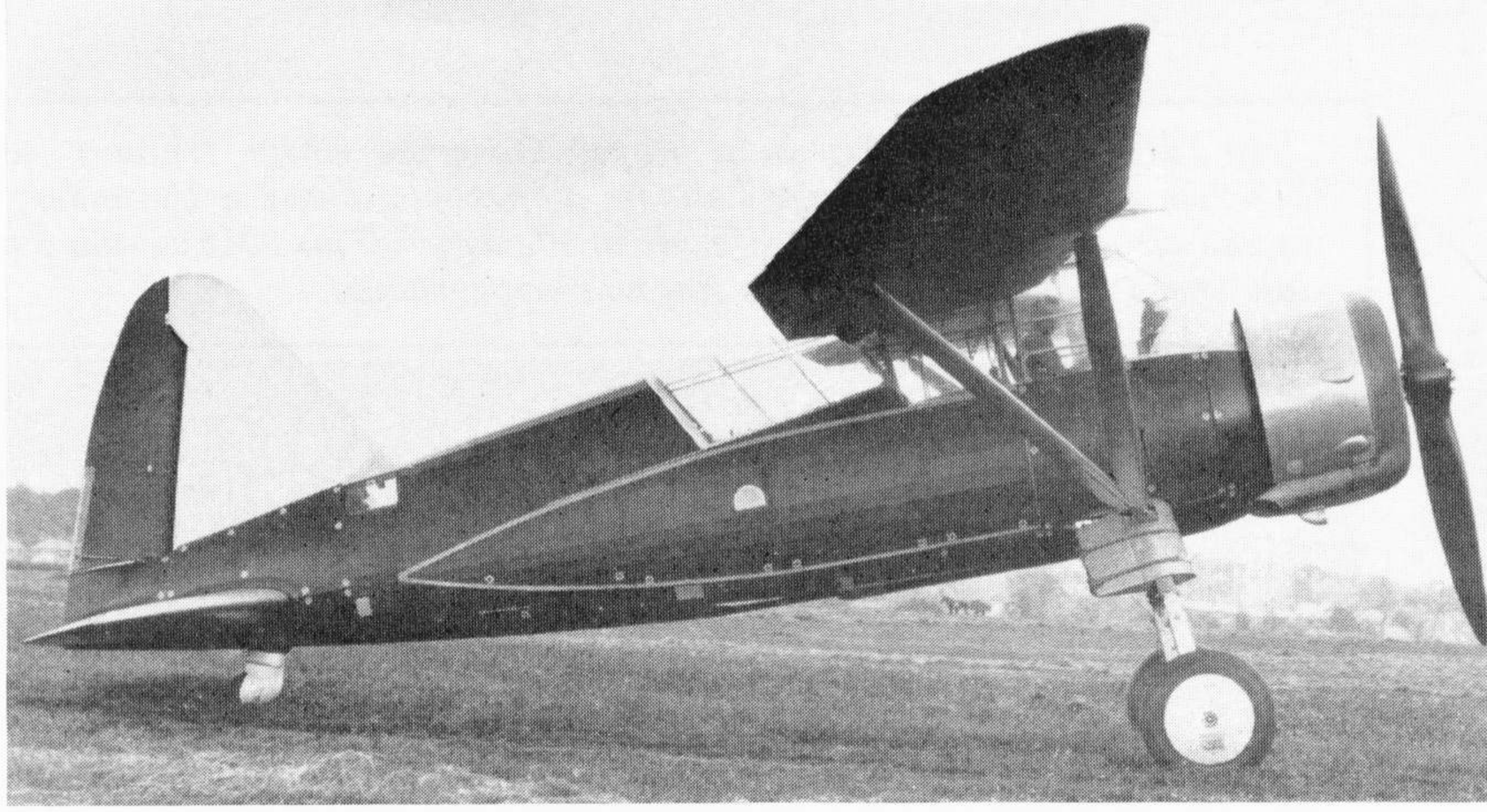
The Westland Lysander

by Francis K. Mason

The Westland Lysander was a classic aeroplane—of that there can be no doubt. Yet its story, its contribution to close support tactics and its design significance has never been fully extolled, nor has the fact that its very performance philosophy presaged the widespread "STOL" capabilities (in the modern idiom) been recognised.

Like other British aircraft of the pre-War R.A.F. expansion period, the Lysander was coincidentally developed on much the same lines of thought as German aircraft, in this instance the Henschel Hs 126. Like the Henschel, however, the Lysander's ground was cut from under it by the radical change of tactics in the area of army co-operation soon after Dunkirk, and its days as a combat aircraft in Northern Europe were numbered. As will be told anon there was a

The Author wishes to acknowledge the considerable assistance kindly given by Mr. Harald J. Penrose, O.B.E., F.R.Ae.S., previously Chief Test Pilot, Group Sales Manager and Director, Westland Aircraft Ltd., in the preparation of this Profile.



The first Lysander prototype, K6127 *in first flight configuration before final doping.*

subtle difference between a combat aircraft in the accepted sense and a stealthy intruder invading the suspicious darkness of Occupied Europe. Certainly the Lysander came closer to the German Army of Occupation than many of the famous fighting aircraft whose names are synonymous with the air war over Europe.

The Lysander was only the second design essay of the brilliant W. E. W. (Teddy) Petter, B.A., who had been technical assistant to Westland's Managing Director, R. A. Bruce, M.A., and became Technical Director when the latter retired. Petter's previous design was a low-wing fighter with radial engine, but this progressed no further than mock-up and tender as the Air Ministry was apprehensive of his ability, despite his technical backing by Chief Designer Arthur Davenport and Chief Technician F. J. Wingfield Digby.

Determined that no such prejudice should jeopardise his next design, Petter and his staff spent many a day with the Audax army co-operation squadrons of the R.A.F. during early 1935 studying operational problems in order to formulate an answer to satisfy the requirements. There was no unanimity, but it was suggested that the pilot should have unobstructed forward view and the aircraft must have easy handling characteristics, good low speed control and be able to operate from a small space. That the Audax did not possess these special qualities was the outcome of the Hawker Hart standardisation policies of the early 'thirties; the Audax, as standard army co-operation equipment between 1932 and 1938, provided the experience and spotlighted the necessary development.

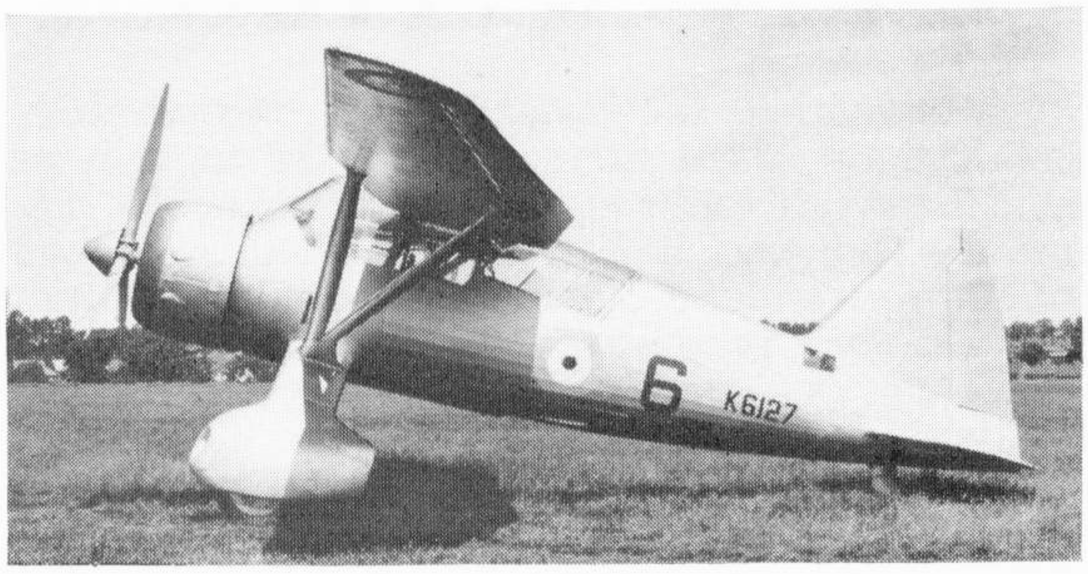
Fundamental decision taken early in the designers' deliberations was to adopt high monoplane wing layout, and consideration of wing loading and specified performance (set out in Air Ministry Specification A.39/34 for an Audax Replacement) led to a fully slotted and flapped wing.

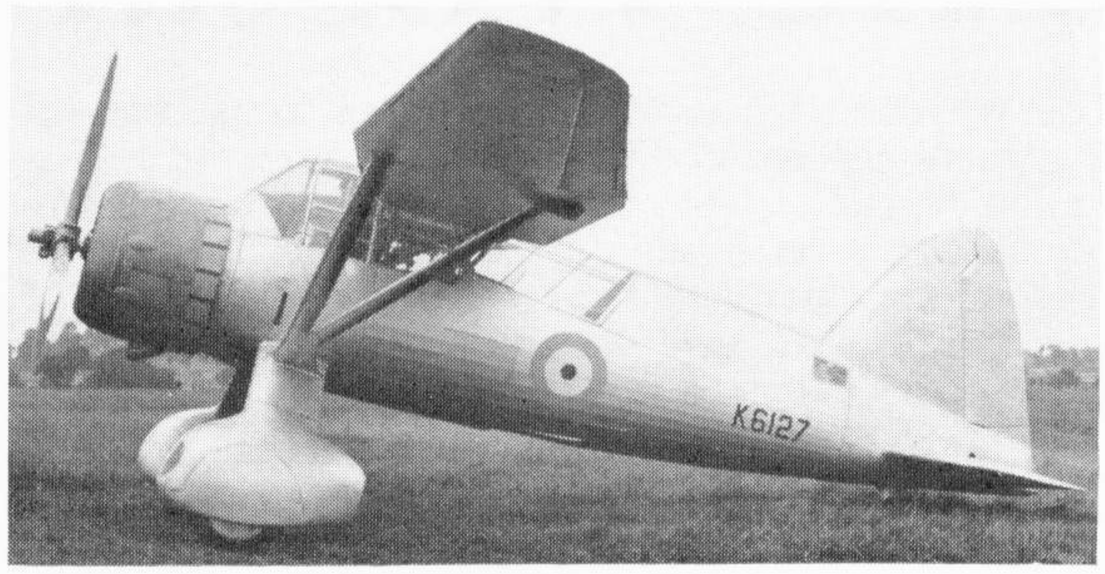
The structure may have been influenced to some extent by a home-built monospar, strut-braced sailplane with torsion nose which was being constructed by Harald Penrose, but the concept of the metal Lysander revealed notable features which showed Petter in no way bound by convention in his challenging design. The duralumin monospar with metal torsion box leading edge supplemented a triangulation of square-section tubular members abaft the spar, and torsion was relieved by V lift struts attached to the robust root end of the rectangular section, extruded hairpin cantilever undercarriage. Critics regarded it as a daring innovation, but the only failure on test (at the weak point) occurred when a Continental test pilot, misled by the steep slope on the north side of Yeovil airfield, stalled heavily on one leg—which snapped. The aircraft did not crash but made another circuit for a single wheel landing without great damage. Perhaps it was sheer politeness that prompted the French to order one Lysander.

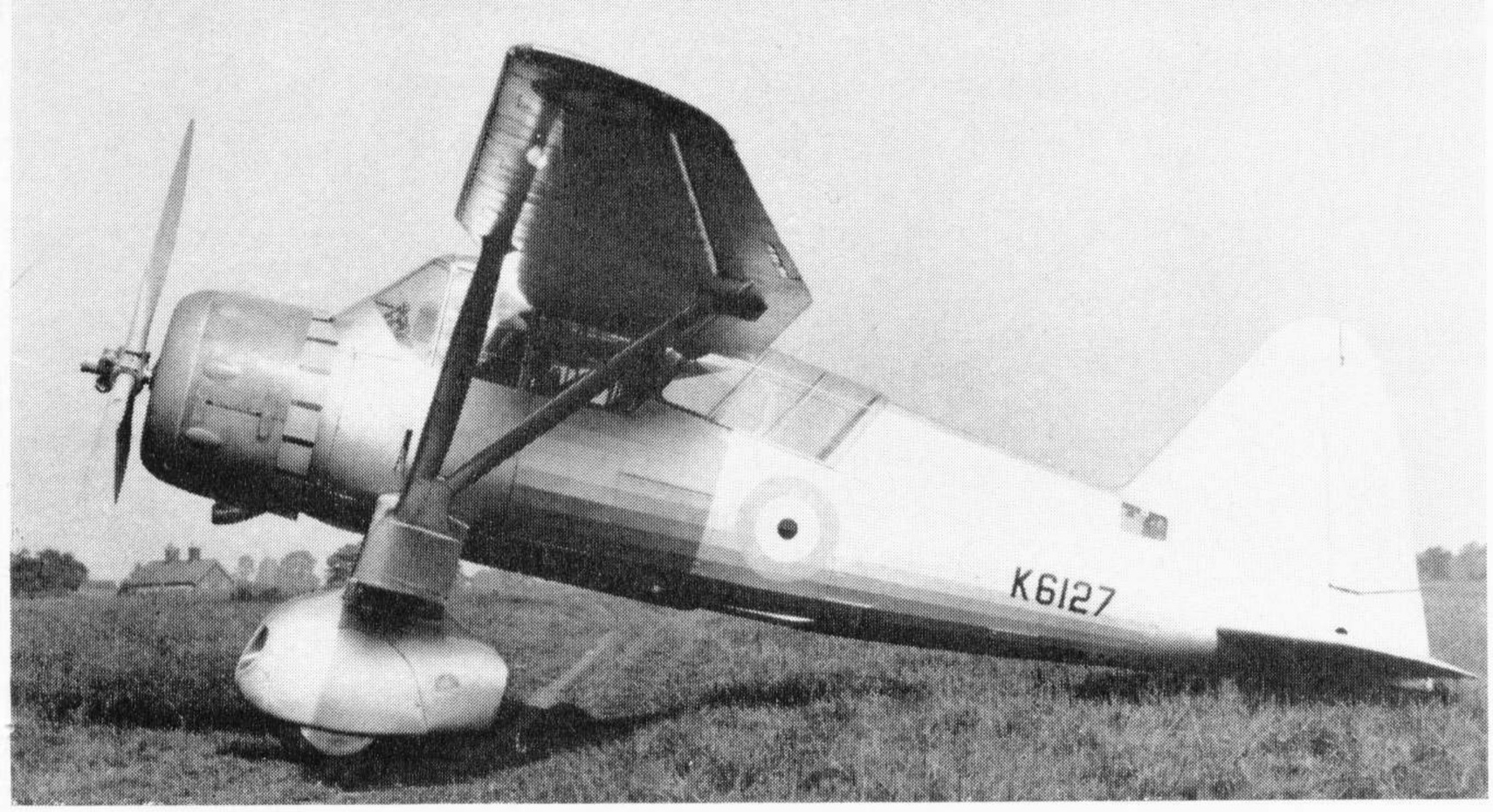
To ensure safe stall behaviour, albeit with high rate of descent, it was necessary to adjust outboard and inboard leading edge slats precisely so that the outer opened first. This was achieved by varying the "venting" where the slat trailing edge rested on the wing leading edge, but even then they opened with a slight jerk, and a quick change of longitudinal trim followed because the inner slats were interconnected with the flaps and drew them down. As the nose dropped, the slats closed and another change of trim followed. Pilots sometimes found this difficult as they tended to glide at the speed at which the slats kept opening and shutting—with resulting undulating approach. It was better to trust the fully open slots, gliding on the slow side, and rumble in.

A favourite trick to demonstrate the Lysander's quick take-off and steep climb out was to place it little more than a football pitch length in front of, but slightly to one side of a derelict cottage on Yeovil field. The aeroplane was lightly loaded, and the pilot no more than 10 stone. Came the day when a very large Turkish test pilot saw this and, in high good humour, decided to sample the trick himself. To the horror of the onlookers the huge pilot boldly taxied to a spot the same distance from the cottage

Left: K6127 *as displayed at Hendon with Experimental Park No. 6 on fuselage.* Right: K6127 *with variable incidence tailplane fitted.*







K6127 *with stub wings fitted and pilot's step moved aft of mainwheel.*

as he had witnessed—but facing straight at it! Before anyone could stop him, he opened up the engine and charged. He just cleared the cottage with inches to spare . . .

EARLY DEVELOPMENTS

Design and construction of the first A.39/34 P.8 prototype, *K6127*, was completed at Yeovil inside one year of receipt of the contract. First taxiing trials were undertaken at the Company airfield on 10th June 1936 and during the next five days the aircraft was moved to the R.A.F. airfield at Boscombe Down for its first flight on 15th June, during which it returned to Yeovil. In its initial flight configuration the aircraft was fitted with a fixed-pitch wooden two-blade propeller and was without cowling gills; nor was the undercarriage fully faired, nor armament fitted.

On 29th June, after minor modifications to servos and mass balance and completion of the undercarriage fairing, *K6127* was flown to Hatfield for the S.B.A.C. Display, and on 24th July went to the A. & A.E.E. at Martlesham Heath for a week's preliminary handling evaluation before returning to Yeovil.

Early flying was with fixed tailplane, despite a nose-down trim change with slots open and flaps down which was greater than tunnel tests had indicated. At maximum level speed the machine was longitudinally unstable. Increased tailplane area was necessary but this aggravated trim problems on the glide and landing. The tailplane was then made trimmable to a large negative angle but this introduced a new problem during overshoot for as the engine was opened up the aircraft nosed up before sufficient negative tail incidence could be wound off by hand. It was not considered expedient to spend further time correcting this condition owing to the urgency of production—which had already started—and the A. & A.E.E. concurred that an adequate remedy would be to instruct pilots to use only partial power in a baulked landing until the tail had been re-trimmed.

Further modifications continued on *K6127*, perhaps least noticeable of which was the constant re-location of the pilot's steps on the port wheel spat. Much later this prototype was brought up to full production standard with the addition of wheelspat-mounted guns, gunsight and rear cockpit Lewis gun.

On 11th December 1936 the second Lysander prototype, *K6128*, was flown, but as the majority of mandatory manufacturers' trials had been completed on *K6127*, this aircraft spent much of its time at Martlesham and was in 1938 shipped out to India where it underwent tropical and field trials with No. 5 Squadron at Miramshah, later returning through the Middle East. It was during diving trials at Martlesham that the lightweight wing fabric started to tear away and, with almost all the top surface missing and much of the lower, the pilot managed to retain control and make a successful though fast landing—to merit a well-earned Air Force Cross.

INTO SERVICE AND INTO ACTION

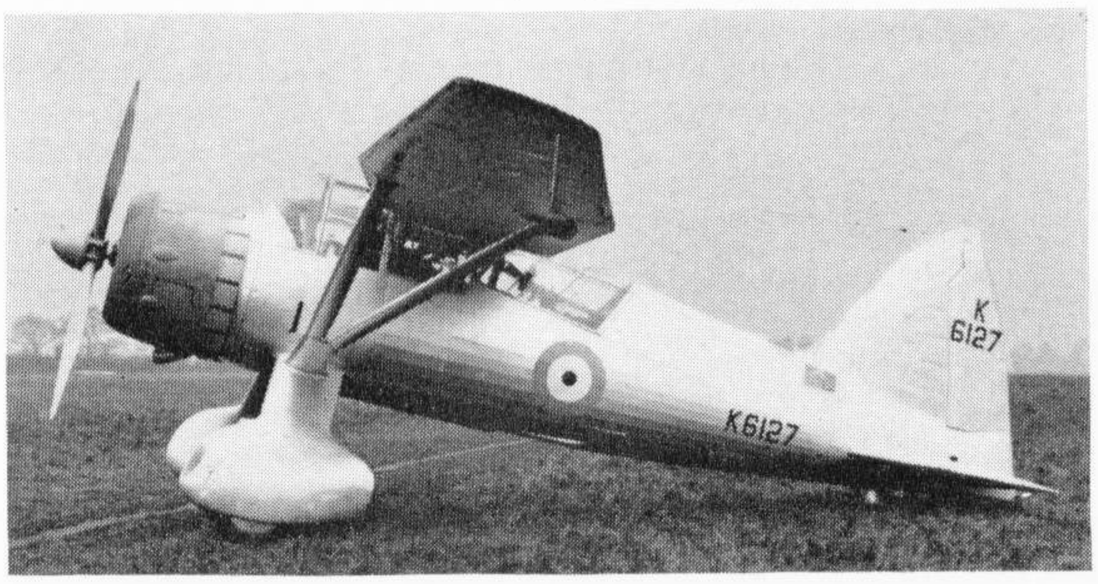
Just two years after the prototype's first flight the Lysander was ready for service. In June 1938 No. 16 (Army Co-operation) Squadron received its first new aircraft; commanded by Sqdn. Ldr. T. Humble, this Squadron was chosen principally because, based at Old Sarum, the School of Army Co-operation could draw upon the Squadron pilots to provide instruction on the new aircraft. By the time of Munich No. 16 had become fully operational and command passed to Sqdn. Ldr. G. P. Charles, and with unconscious irony an Air Staff instruction warned the Squadron to regard itself as a fighter squadron!

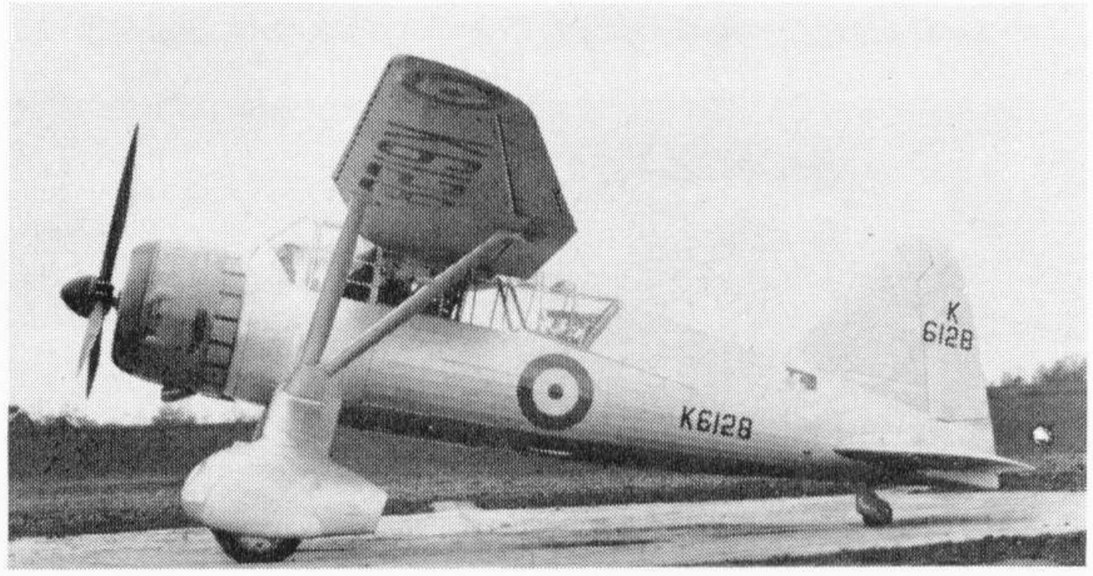
However perhaps an immediate realisation of the Lysander's shortcomings in this rôle prompted the Squadron's omission from the strength of Fighter Command, and during 1939 exercises with the army on Salisbury Plain continued to occupy No. 16 Squadron's efforts.

Production of Mark I Lysanders continued into 1939 and amounted to 66 aircraft for the R.A.F.; fourteen of these had been issued to No. 16, followed

Left: K6127 *in production form with rear gun armament and service radio fitted.* Right: *Full production standard prototype* K6128; *note differences in rear cockpit hood.*

(All photos by courtesy of Westland Aircraft Ltd., Neg. Nos. 5165, 5177, 5217. 5223, 5272 and 5579)





First production Lysander I, L4673.
(Photo: Westland Aircraft Ltd., Neg. No. 5670)

by nine to the School of Army Co-operation. No. 13 (AC) Squadron started to dispose of its Hawker Hectors in January and on 23rd of the month the first Lysanders arrived at Odiham; working up continued under the leadership of Sqdn. Ldr. S. C. H. Gray, and in April the Squadron moved to Duxford—with it a young pilot, Fg. Off. R. C. Porteous, twenty years later to fly army Auster A.O.P. light aircraft as a Chief Test Pilot.

The remaining Lysander Is were issued to No. 26 Squadron at Catterick (this unit winning the Sassoon Air Photographic Competition within three months of receiving its first Lysanders) replacing Hectors, to No. 4 Squadron (commanded by Sqdn. Ldr. G. P. Charles who moved from No. 16 in August 1939) at Wimbourne, and No. 2 (AC) Squadron at Hawkinge. The latter Squadron was commanded by Sqdn. Ldr. A. J. W. Geddes who, like most of the Army Co-operation squadron commanders of the day, had been seconded to the Royal Air Force from the Royal Artillery.

By the time war broke out, there were seven Lysander squadrons—Nos. 2, 4, 13, 16, 26, 613 and 614, the last two of the Auxiliary Air Force. Most of the Lysander Is had been replaced in first line strength at home, their place being taken by Bristol Perseus XII-powered Mark IIs. Many of the older aircraft had been shipped out to the Middle East where they finished up with No. 208 (AC) Squadron in Egypt—but of that, more later.

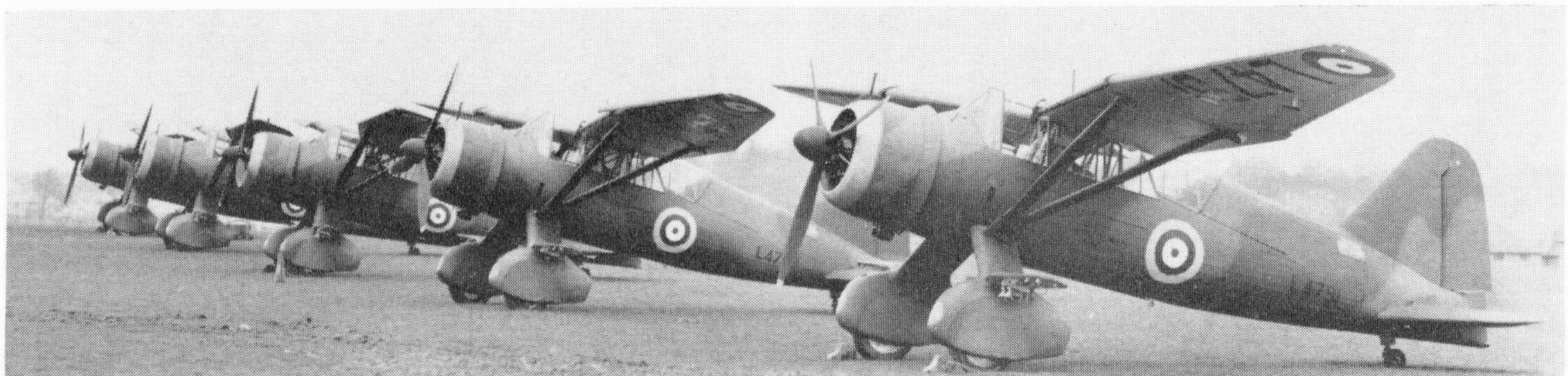
Those first few quiet months on the Western Front found all but one of the Lysander squadrons in France, only No. 16 remaining at Old Sarum. Nos. 2 and 26 moved to Le Plessiel in October, Nos. 4 and 13 to Mons-en-Chaussée. The first winter of the War was a time of some hardship for the army co-operation units for the heavy rains prevented much flying, and what little there was to relieve the tedium was confined to aerial photography of the British lines, an occasional surreptitious squint into Belgium, and affiliation exercises with Gladiator fighters. With the coming of the heavy snow it was decided to disperse No. 2 Squadron to Drucat and No. 4 to Monchy Lagache; meanwhile No. 16 was moved from Old Sarum closer to France in February 1940, taking up field support duties at Lympne—a move whose wisdom was to become evident three months later.

The *blitzkrieg* fell upon the West on 10th May and upon armies only superficially trained to withstand assault from the air. True "army co-operation" air force units existed, but the Lysander squadrons were scarcely a factor to match the highly integrated German invasion forces. In contrast with the closely co-ordinated enemy air and armoured thrusts, aiming to turn the left flank of the Maginot Line, only hurried and ill-rehearsed actions by Blenheims and Battles were ordered as attempts to ease the pressure upon the British and French armies.

The attack upon Belgium had been foreseen and, according to plan, Nos. 2 and 4 Squadrons moved forward to Lille-Ronchin, leaving the other Lysanders to carry out reconnaissance and gun spotting for the B.E.F. Having regard for the large numbers of enemy fighters operating close up to the battle lines, the Lysander crews flew in constant danger and it was hardly surprising that casualties mounted quickly. As No. 4 Squadron Lysanders flew into Belgium, one of them, flown by Plt. Off. Langley, was attacked by six Bf 110s and in the running fight the gunner, L.A.C. Gillham, shot down one of the powerful adversaries before escaping at very low level. But the Squadron was decimated, losing nine crews and eleven aircraft in 106 sorties over the battle line between 10th and 23rd May. Some of the Lysanders were destroyed on the ground in a raid on Clairmarais, and only five crews and aircraft returned to Ringway on the 25th.

No. 2 Squadron went forward into Belgium with seventeen Lysanders and, so as to provide the widest cover for the B.E.F., dispersed about three aircraft to each of the airfields at Abbeville, Bethune, Roncq, Lille and Brussels. Plt. Off. C. H. Dearden, in Lysander *KO-N* was attacked by nine Bf 109Es over Cambrai and survived a twenty-minute running battle all the way back to Douai where 32 holes were counted in his fuel tank! However his gunner, A.C. Patterson, had to set fire to the aircraft to prevent it from falling into enemy hands. Over Merville

Line-up of early Lysander Is at Yeovil. Both "A" and "B" camouflage schemes are visible.
(Photo: Westland Aircraft Ltd., Neg. No. 5864)



Fg. Off. Doidge in *KO-U* shot down a Henschel Hs 126 with his front guns while his gunner put paid to a Ju 87 with the rear gun at 1700 hrs. on 22nd May.

No. 2 Squadron withdrew from the mainland to Bekesbourne in Kent with twelve aircraft but continued to lend support to the heavily pressed British and French armies falling back on the sea. At 6 p.m. on 25th May Plt. Off. Scotter and L.A.C. Evans in *KO-X* were set on by fifteen Bf 109Es near Boulogne but managed to escape and land at Hawkinge with considerable cannon fire damage to the cockpit, undercarriage, fuel tank and port wing. Two days later, in answer to urgent calls for help, eight Lysanders took off to drop supplies to the defenders of Calais, and fifteen containers of small arms and anti-tank ammunition were successfully dropped on the Citadel garrison in the face of tremendous machine gun fire from the German forces. By the time of the Dunkirk evacuation the Squadron had scarcely a serviceable Lysander left. (On another occasion a composite supply sortie carried out by sixteen Lysanders and Hectors over Calais resulted in the loss of fourteen aircraft and crews.)

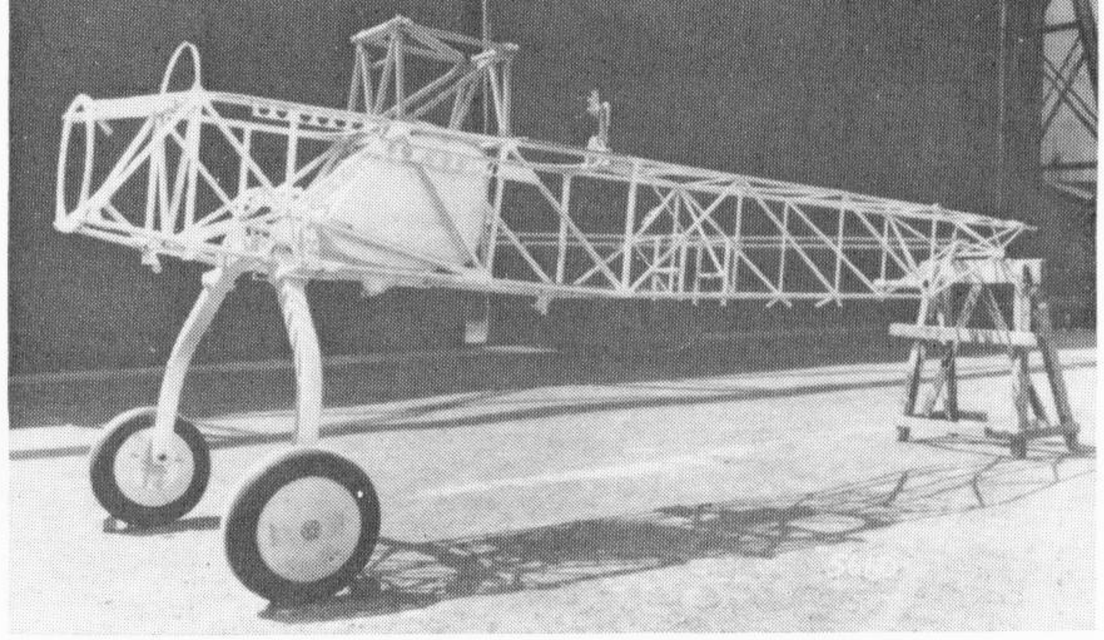
Of the other Lysander squadrons, No. 16 was perhaps as much in the battle as No. 2. It is not quite clear from existing records just when No. 16 went to France after it had moved to Lympne, but shortly after the German attack on 10th May, it was heavily committed on close reconnaissance over the B.E.F. in the area of St. Quentin. Several Lysanders were destroyed on the ground while refuelling, and *L4796* was missing from a recce sortie on 17th May; two days later a flight of five Lysanders was caught at medium altitude by enemy fighters and lost two of its number. Owing to the heavy casualties suffered by other squadrons, it was decided to withdraw No. 16 to Lympne while it was still intact, and, with No. 2 Squadron, flew to Calais to drop supplies on the beleaguered garrison. (On the way home one Lysander, *P1720*, was attacked by Spitfires; although the gunner was killed, the pilot managed to bring his aircraft home.) The sixteen surviving Lysanders carried out countless bombing sorties; one memorable raid caught a large enemy motor convoy near Cambrai, the 40 lb. G.P. bombs probably proving entirely adequate against the soft-skinned vehicles. No. 16 also had its share of victories; Fg. Off. Weston Burt with Cpl. Barlow in *L4806* shot down an Hs 126 over St. Quentin on 18th May, and Plt. Off. Dexter and A.C. Webb, in *L4793*, each claimed Bf 109Es in a 35 minute fight over Arras on 21st May.

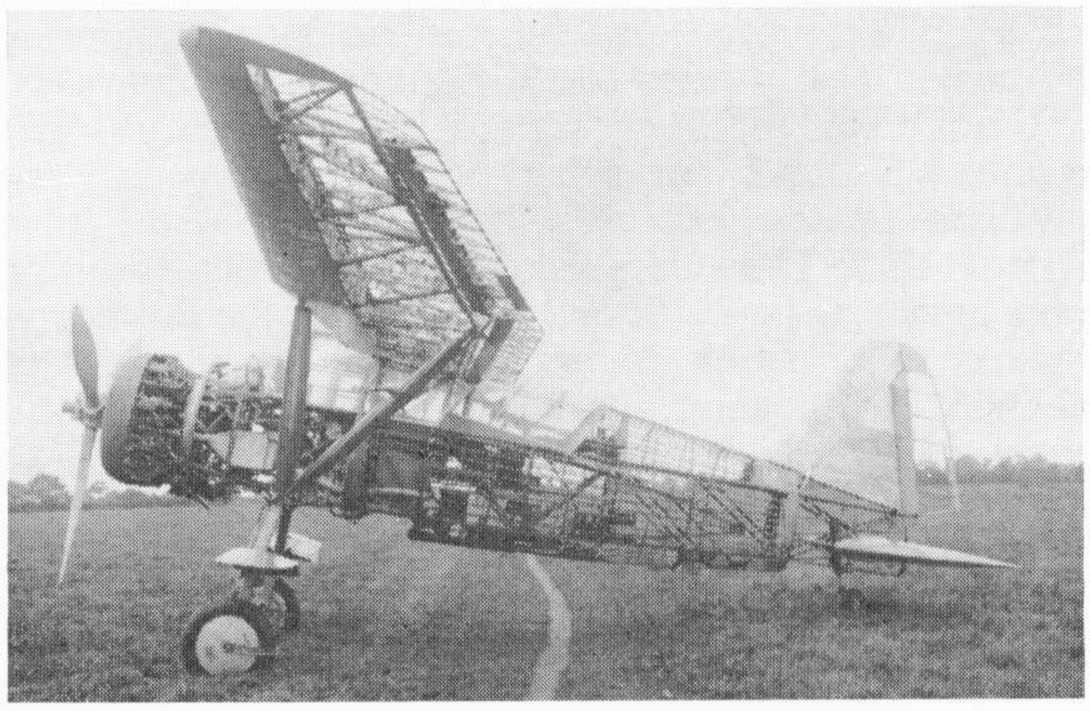
THE COST OF FRANCE, AND AFTER

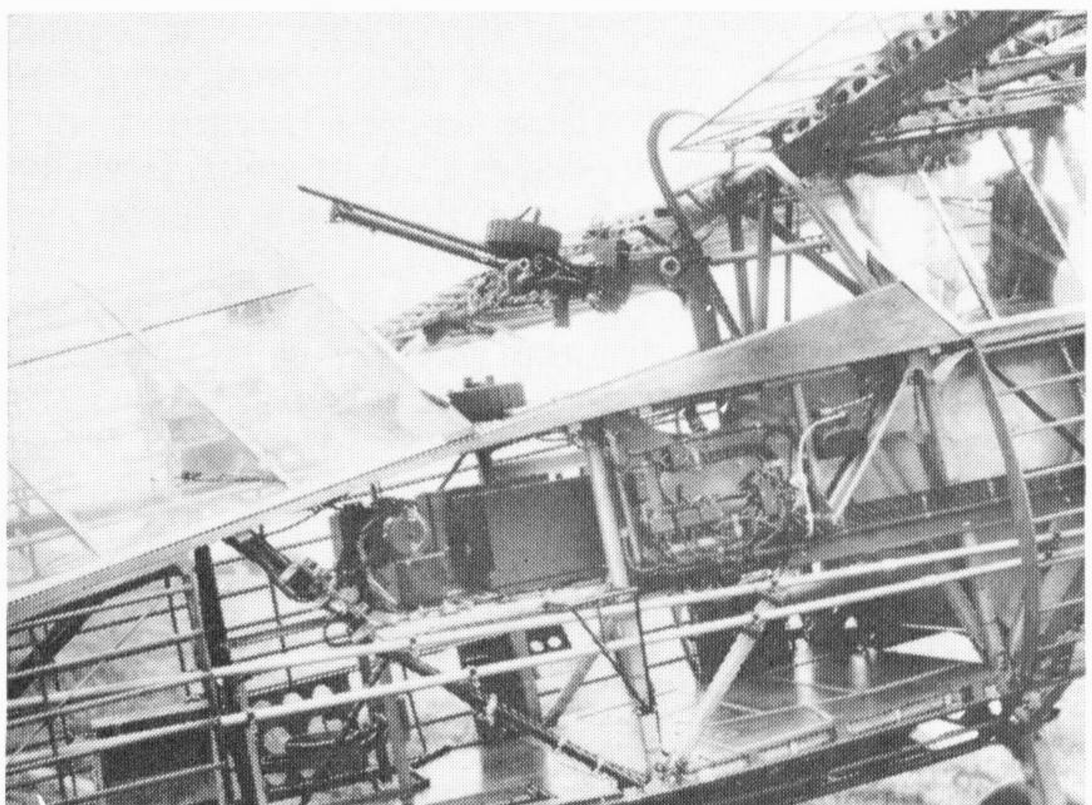
From an examination of surviving records it seems that a total of 174 Lysanders went to France between September 1939 and May 1940. Of these eighty-eight are known to have been lost in air combat, almost all of them during the Battle of France. A further thirty were destroyed on the ground either by the enemy or because of insufficient fuel to fly them home. Between them the seven squadrons lost about 120 crew members and brought back about fifty aircraft. The price of "army co-operation" had been high indeed.

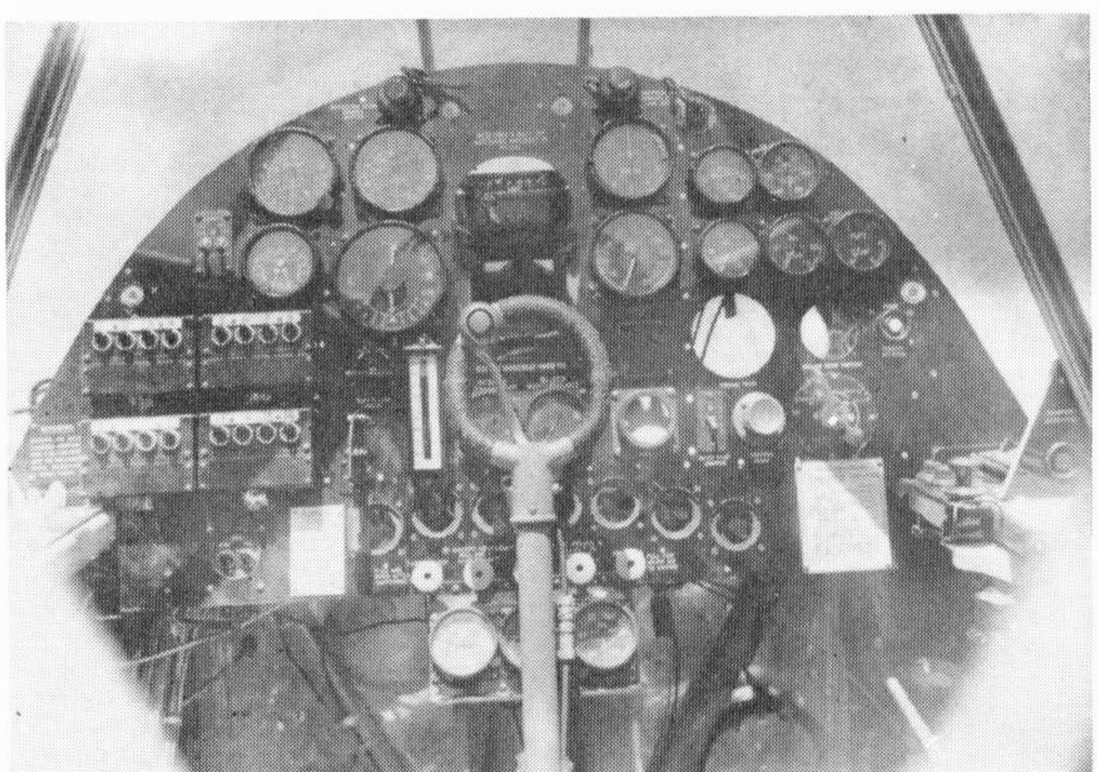
As Britain's army dispersed throughout the United Kingdom to lick its wounds after Dunkirk, most of the Lysander squadrons were withdrawn to the north and west while the General and Air Staffs indulged in some fundamental re-thinking.

Despite the limited use by the Germans of the









Some intimate Lysander details. Top: *The primary fuselage structure* (Westland Neg. No. 5660); Second photo: *The unclothed second prototype* (Ministry of Defence Neg. No. 8925E); Third photo: *Close-up of rear cockpit and single Lewis gun mounting* (Ministry of Defence Neg. No. 8904T); Bottom: *Cockpit layout; notice on extreme left states: "Warning. Bombs on rear carrier: switches Nos. 11, 12, 13, 14 must not be released with message hook down." On the extreme right can be seen the Morse key and a push button marked "Gunner's Attention".* (Ministry of Defence Neg. No. 8866J)

Tropical trials were carried out with the second prototype K6128, *seen here with Wapitis of No. 5 Squadron, Miramshah in Northern Waziristan.*
(Photo: via Harald Penrose)

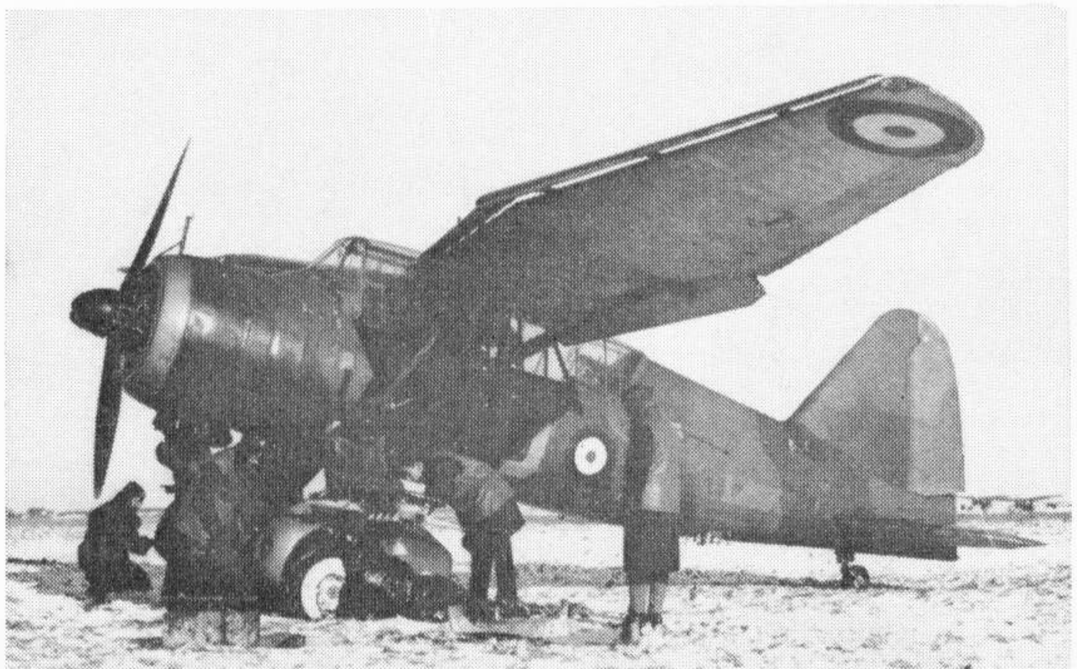
similarly-conceived Henschel Hs 126, the real lesson in army co-operation lay in the tactical use of supporting fighters and light bombers. Certainly in the face of enemy fighters the Lysander was something of a sitting duck unless heavily escorted, despite the occasional victories claimed by its crews.

However the change in the Lysander's rôle was probably prompted and spurred on by the opening of the Battle of Britain. No. 26 Squadron was, however, left at West Malling, kept busy throughout that eventful Summer surveying possible enemy landing grounds in the expected invasion, until on 18th August three Lysanders were destroyed in a bombing raid on the airfield. Shortly afterwards the Squadron moved to Gatwick to perform the lowly tasks of ack-ack calibration and balloon spotting until, early in 1941, American Tomahawks started to replace the Lysander IIIs.

Nos. 13 and 16 Squadrons, withdrawn to Hooton Park and Western Zoyland respectively after Dunkirk, sent detachments to coastal airfields during the Battle and commenced air-sea rescue duties, searching for and dropping dinghies to ditched pilots. A dozen other Lysander squadrons and flights were formed in 1940 and 1941 to carry out this monotonous but vital task; countless Allied aircrew members owe their lives to the appearance of that singular, friendly-looking Lysander with dinghy and supplies suspended from the stub wings.

Only No. 4 Squadron can be said to have actively continued in the traditional rôle of army co-operation. Moved to Linton-on-Ouse on 10th June 1940, the Squadron was called on to provide ground forces on training manoeuvres with tactical reconnaissance and light bombing support. By the end of the year No. 4 had moved to Clifton, and thereafter for nearly eighteen months worked in conjunction with the 11th Armoured Division; not until June 1942 did the old Lysanders give place to Tomahawks.

Despite security attempts at anonymity, this Lysander II of No. 13 (AC) Squadron (which has suffered a sudden loss of tyre pressure in French winter surroundings of 1939-40) can be identified as L4767, *seen here at Mons-en-Chaussée.*
(Photo: Imperial War Museum, Neg. No. C519)



BACK TO FRANCE WITH STEALTH

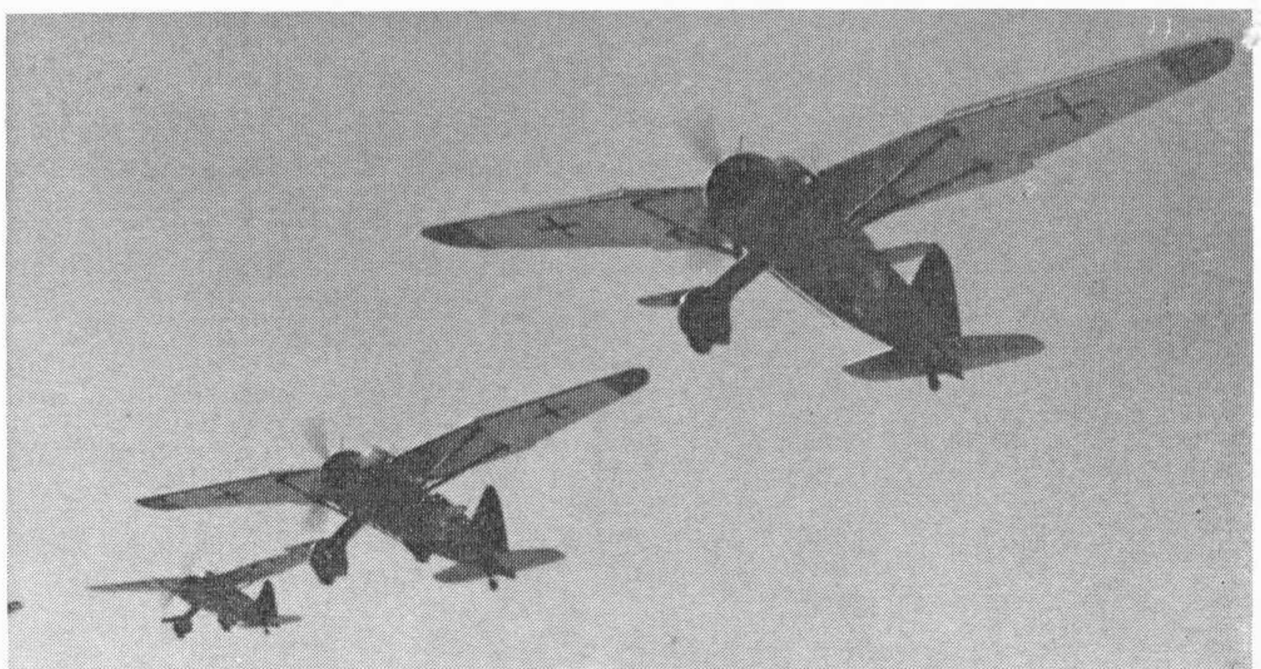
If anything could be more dramatic than the sight of Westland Lysanders and Hawker Hector biplanes dropping supplies on the Calais Citadel in May 1940, it was the way in which the Lysander crept back to France eighteen months later.

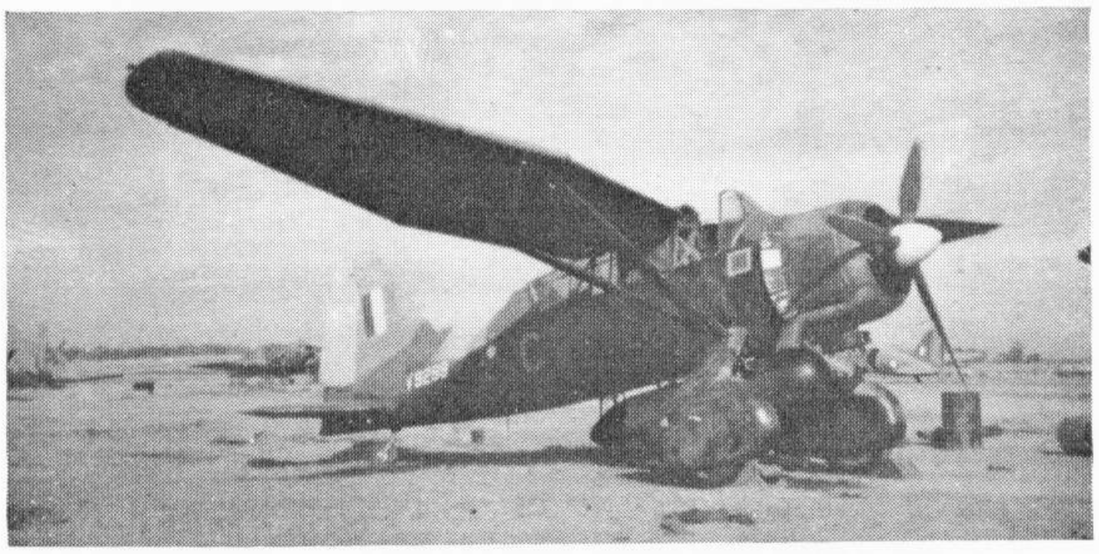
Shortly after the fall of France a secret organisation, the Special Operations Executive, was set up in England to maintain contact with and encourage loyal patriots in enemy-occupied Europe. A year later, in August 1941 a new Squadron, No. 138 (Special Duties), was formed at Newmarket—itself an enigmatic "airfield" from which prototype Meteor jet fighters performed some of their early test flights. Even twenty-five years later very little has been released for publishing about the clandestine activities of No. 138 and its later partner, No. 161 (SD) Squadron.

No. 138 Squadron was initially equipped with Hudsons, Whitleys and Lysander IIIs, these being joined soon after by Halifaxes. The Squadrons' duty was to maintain contact with partisan forces in France, dropping supplies of ammunition and explosives by night and occasionally delivering saboteurs to France under the very noses of the Germans. Sometimes it was necessary to rescue a "wanted" man, or to bring a Resistance leader back to London for briefing. On other occasions, shot-down Allied airmen who had been sheltered from the enemy by the French would return in Lysanders that had delivered other passengers to France.

Always it was the Lysanders that performed the actual landings by night for the tractable, slow flying and short landing performance was in a class of its own. The Hudsons, Whitleys and Halifaxes were used to drop supplies and the occasional agent by parachute. Flying from Newmarket—and later from that most secret of all airfields, Tempsford—the Lysanders staged at Tangmere, Lympne or Hawkinge to refuel, and then set off soon after dusk to a doubtful rendezvous in France, the landing ground often

Lysanders of No. 208 (AC) Squadron wearing exercise markings late in 1939.
(Photo: via G. J. Goulding)





Six Lysanders were shipped out to Karachi late in 1944 where they were assembled and then flown to Josore and on to Mingaladon as "C" (Special) Flt. of No. 357 (Special Duties) Squadron. They were used for agent dropping operations with the XIVth Army and carried a spider motif in the centre of the fuselage roundel. The C.O., Sqdn. Ldr. Turner (ex-S.O.E. pilot) flew the aircraft "C", V9289, shown here, and carried a XIVth Army insignia on a scarlet rectangle immediately below the windscreen. By the end of the war one of these Lysander III (S.D.)s had been lost, one was flown back to India by the C.O., and the remainder were simply taxied into the swamps.

identified by three small torches held by Resistance fighters.

As the winter of 1941-42 passed, it was clear that if Lysanders were to penetrate further into France they must be provided with longer range. The Lysander IIIA (normally armed with twin rear guns) was developed to cater for the requirements of the two S.D. squadrons, and a large fuel tank was added under the fuselage. A ladder was attached to the port side of the rear cockpit to enable the occupant to enter or leave without delays, and for night visibility the rungs were picked out in fluorescent paint; otherwise the "Joe-carrying" Lizzies usually went about their nefarious labours in a coat of matt black.

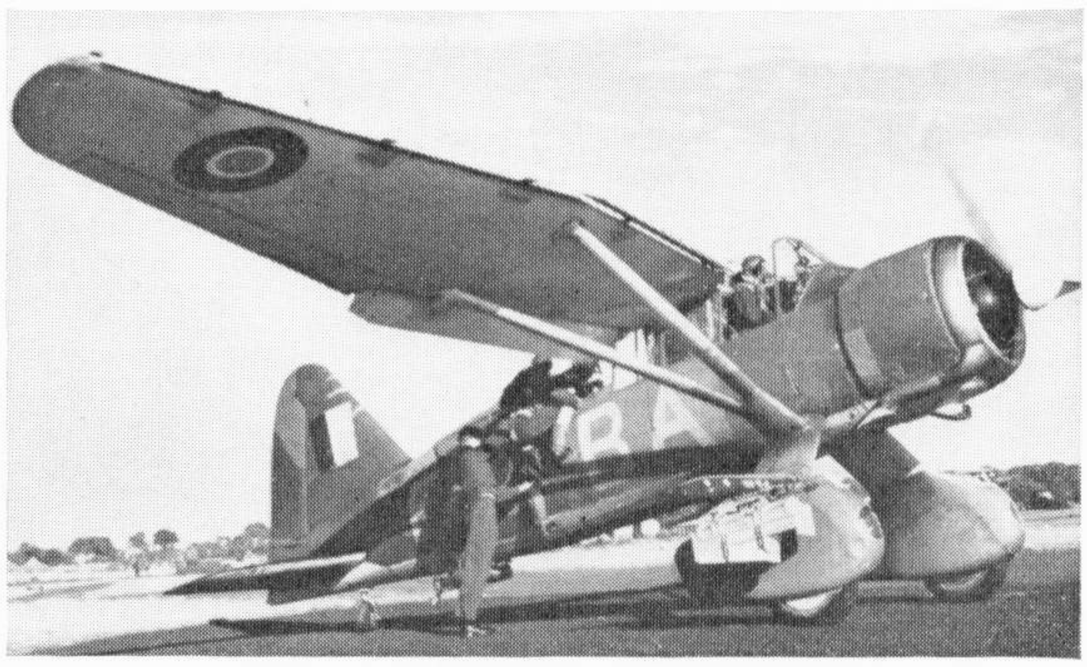
Several of the members of these Squadrons have been named, but few of the passengers' names will ever be published. Wing Commander Fielden (later Air Vice-Marshal Sir Edward Fielden, K.C.V.O., C.B., D.F.C., A.F.C.) commanded No. 161 and later R.A.F. Tempsford, and Sqdn. Ldr. F. E. Rymills, D.F.C., D.F.M. was a C.O. of No. 138 Squadron.

Between August 1941 and the end of 1944, something like four hundred sorties were carried out by the two squadrons based at Tempsford, No. 161 performing one hundred and eleven successful trips out of 157. 293 agents and other "passengers" were delivered into France, and more than 500 brought back.

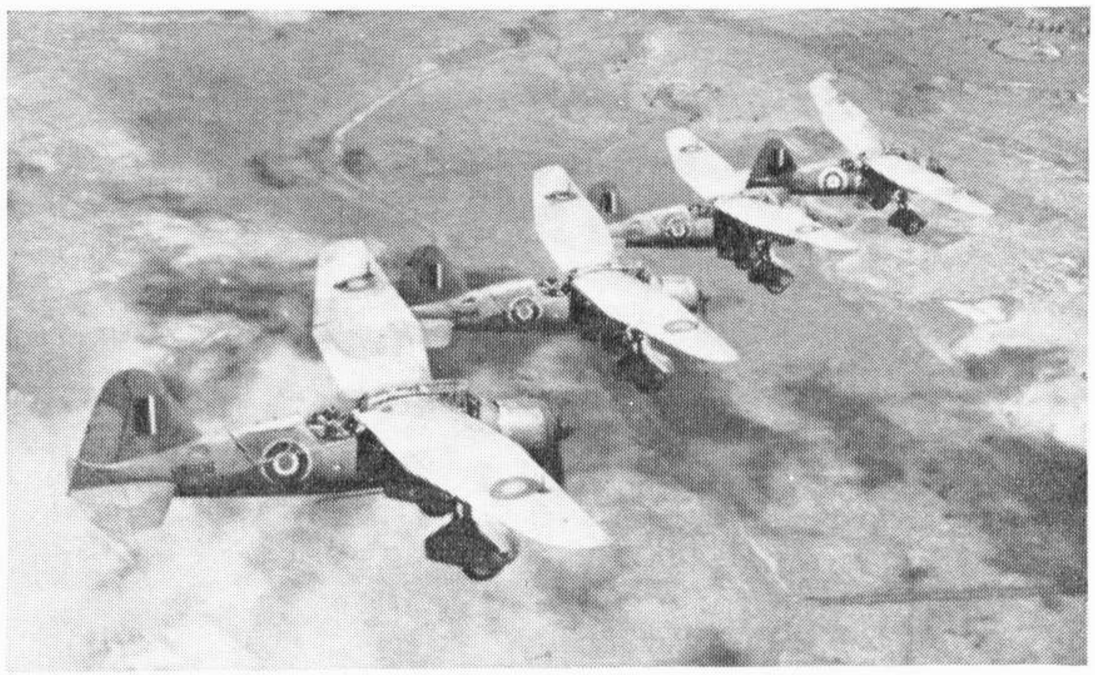
Every sortie carried out was fraught with extraordinary danger, for there was no *knowing* who would be holding those three vital torches, and the Lysander presented an easy target once it came to rest on unfriendly territory. On at least one occasion the Germans were waiting: as the aircraft came to a standstill a searchlight snapped on and machine guns opened fire. The pilot, Sqdn. Ldr. Conroy, rammed open the throttle and struggled to take off—stemming the flow of blood from a neck wound with one hand. Brushing through the trees at the edge of the field, Conroy brought his bullet-riddled aircraft all the way home to Tempsford—an astonishing feat of single-handed flying, not to mention the night navigation.

The operations were unsung dramas, but at least one passenger's name has since attained fame—for M. Vincent Auriol was later to become President of the French Republic. And after the War, to commemorate those clandestine, heroic activities, a single rather shabby black Lysander IIIA, *V9614*, was presented by Britain for display in the Free French Memorial.

A Lysander III of No. 2 (AC) Squadron, T1532, *still equipped for and engaged in army co-operation duties in 1941. This aircraft was later converted for target towing.*
(Photo: Imperial War Museum, Neg. No. CH2639)

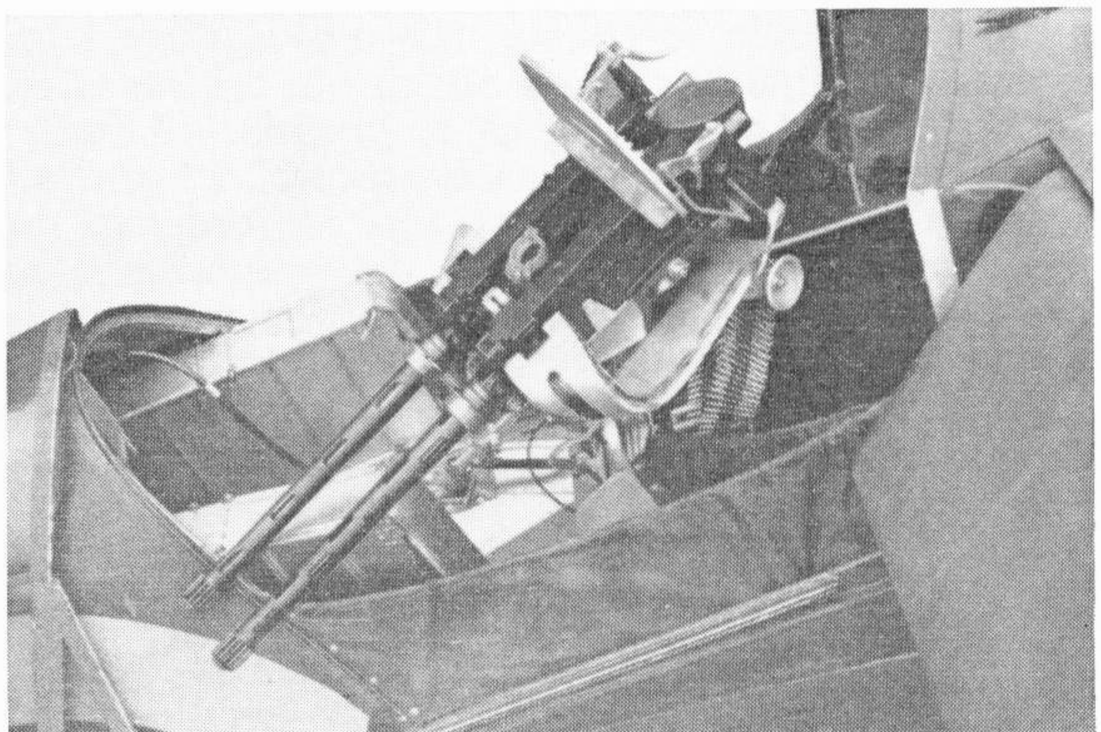


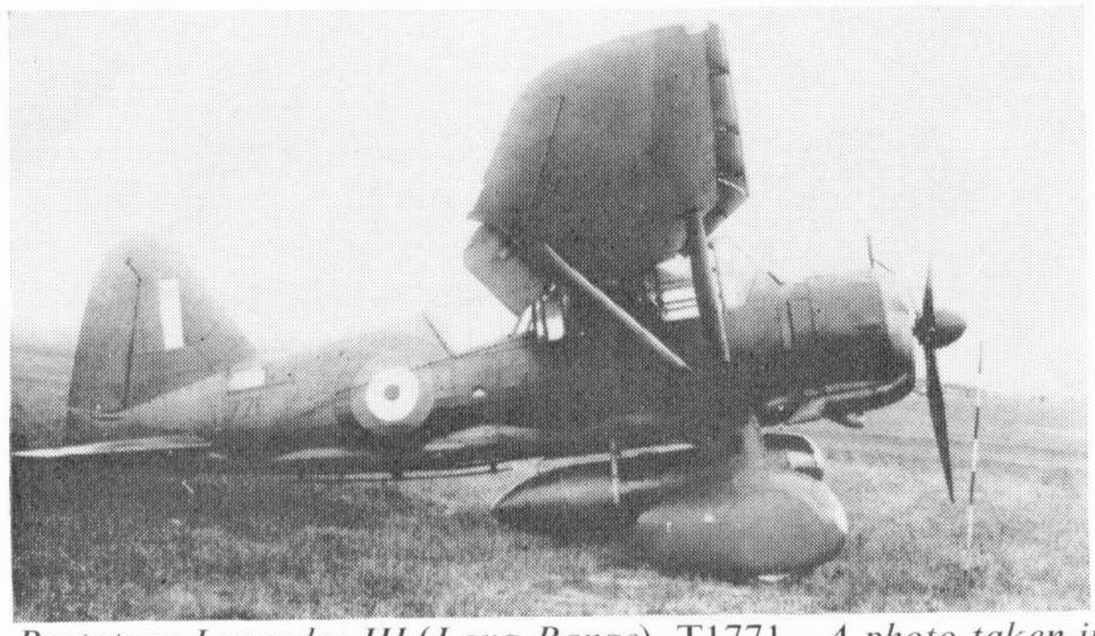
Among the air-sea rescue squadrons equipped with Lysanders was No. 277; aircraft BA-E, V9547, *is seen here with dinghy containers on stub wings and smoke floats on the rear fuselage racks.*
(Photo: Imperial War Museum, Neg. No. CH7571)



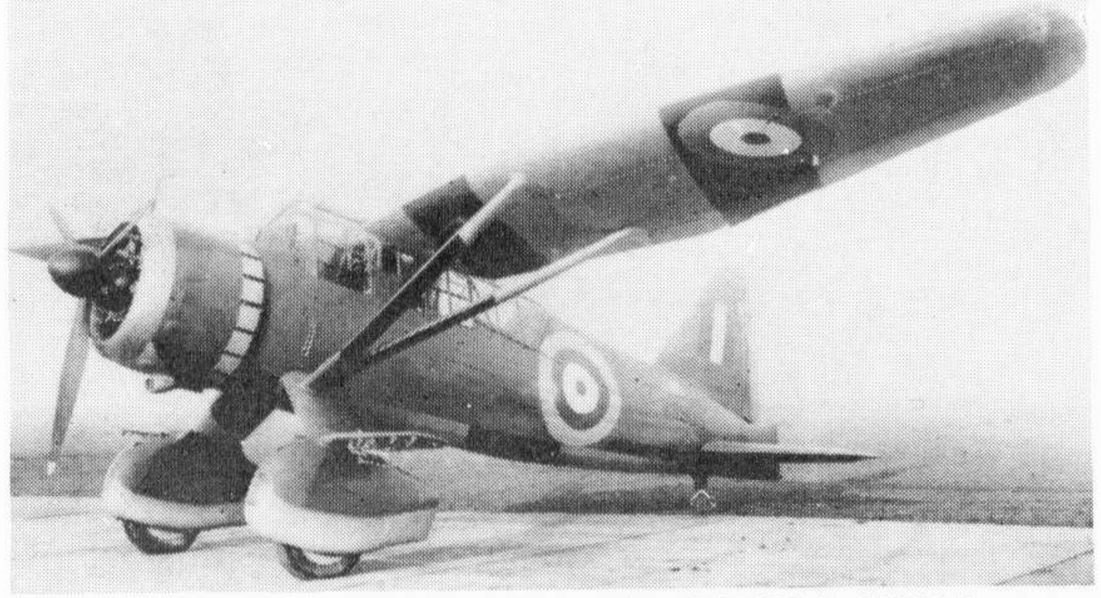
Lysander IIIAs flying over Madagascar; it is believed that these belonged to a Free French Air Force Squadron.
(Photo: Imperial War Museum, Neg. No. MAD286)

Close-up of the twin Browning gun installation in the Lysander III; ammunition belt boxes replace the 97-round drums used on the Lewis guns. (Photo: via G. J. Goulding)





Prototype Lysander III (Long Range), T1771. *A photo taken in June 1941 at the A. & A.E.E., Boscombe Down. These trials were the first manifestation of the demand for greater range in the Lysanders to be used by the Special Duties squadrons.*
(Photo: Imperial War Museum, Neg. No. MH5531)



The penultimate production Lysander T.T.IIIA, V9905.
(Photo: Imperial War Museum, Neg. No. MH5528)

LYSANDERS IN THE EAST

The results of the second prototype Lysander's trials in India and the Middle East were that very early production Mark Is were earmarked for overseas shipment from the outset of production. The result was that all the early aircraft arrived in Egypt without carburettor filters so that no sooner than the second shipment had arrived that they had to be used as replacements for the first!

First to receive the Lysander in the Middle East was No. 208 (AC) Squadron in mid-1939 based at Qasaba. By the outbreak of war with Italy on 10th/11th June 1940, 208 Squadron (commanded by Sqdn. Ldr. R. Sprague) had thirteen Mark Is and took up its position at Sidi Barrani on the commencement of hostilities. The very first operational sortie of the theatre was a frontier recce near Sollum for the 7th Armoured Division by Plt. Off. Hardiman in *L4677* on 11th June, but the pilot had to force land in the desert owing to shortage of fuel!

Throughout the remainder of 1940 No. 208 was fully occupied in artillery spotting sorties and was constantly committed over and around Bardia towards the end of the year.

With the threat to Greece, 208 moved three Hurricanes and nine Lysanders across the sea *via* Crete and by 15th April 1941 was at Phasala. Already, however, the *Luftwaffe* was in control of the air situation and enforced moves were the order of the day to escape destruction on the ground and to provide the widest reconnaissance for the rapidly withdrawing land forces. For instance during a move to Kazaklar on the 16th, Bf 109s shot down two Lysanders—although both crews escaped. On the 20th the Squadron withdrew to Argos, and in retiring to Crete on the 22nd another Lysander fell to the guns of a Bf 109. (The German radio announced after the fall of Greece that "No. 208 Squadron, that invaluable link between the Army and Air Force in Greece, had been destroyed and all personnel either killed, seriously wounded or captured." In fact, there were no casualties on the Squadron at all, but the three Hurricanes and three Lysanders had been lost).

By June 1941 No. 208 Squadron was established with two Hurricane Flights and one of Lysanders, but thereafter gave up the latter.

No. 6 (AC) Squadron was the other front line unit to receive Lysanders early in the War. In September 1939 it had been flying an assortment of Gauntlets and Hardys on operations in Palestine. On 14th February 1940 the first two Lysanders, *L6883* and *L6884*, arrived at Ramleh, and these were followed by eleven more during the next month. Operations in Palestine continued throughout 1940 and included blackout inspection, coastal watch for illegal immigrants and general co-operation with the Palestine Police.

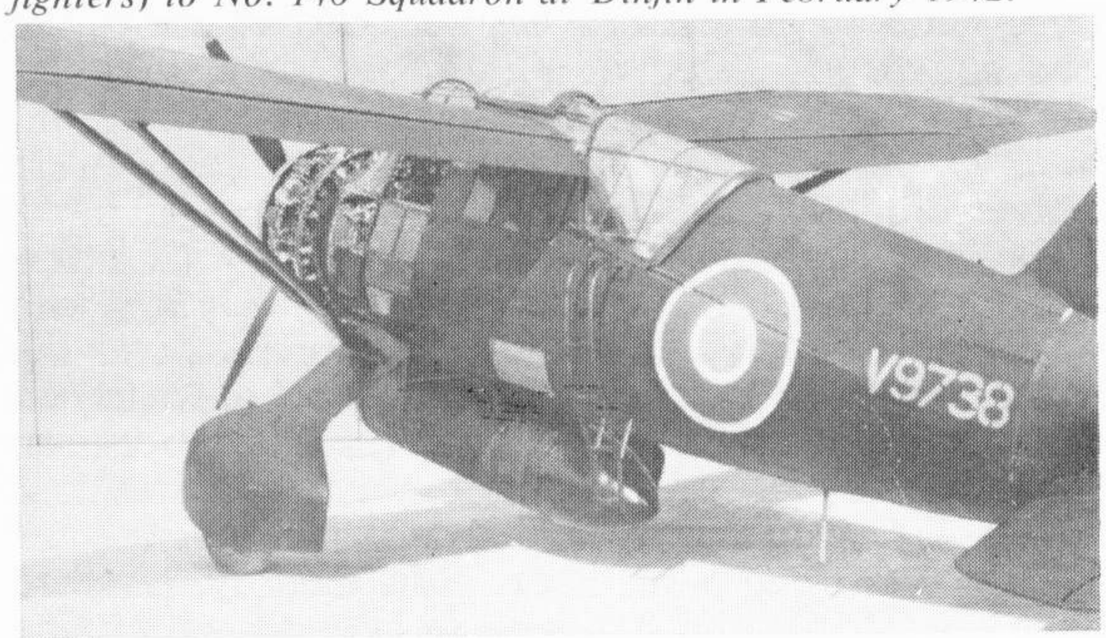
On moving into the Western Desert when Italy entered the War, No. 6 advanced into Cyrenaica, but during the subsequent retreat was ordered to remain at Tobruk where it continued to provide air close support over the besieged garrison. On 9th April 1941 Fg. Off. J. E. McFall, D.F.C. and Cpl. Copley destroyed a Ju 52 in the air over Mechili.

An amusing incident occurred on 15th May 1941 when a lone Lysander pilot on patrol over the desert was swiftly passed by nine Bf 109s escorting a Henschel Hs 126. The escort pilots failed to notice the Lysander, whose pilot promptly turned on the Henschel—which turned tail and fled!

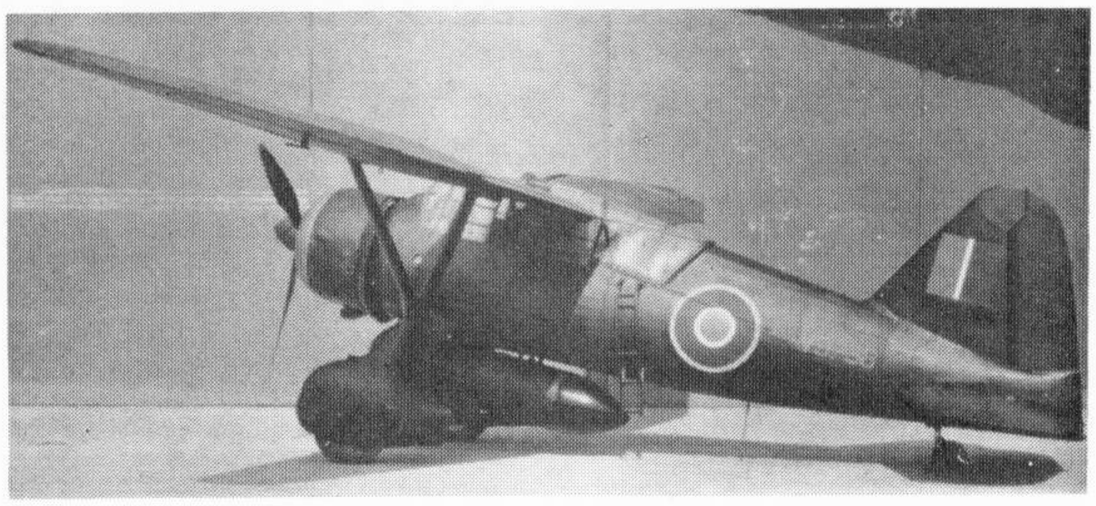
By the beginning of 1942 the Lysanders were being withdrawn from No. 6 as the Squadron's establishment was changed to Hurricane IIs.

The Lysander did not reach India for squadron service until late in 1941.* In September they arrived

** It has been stated elsewhere that Lysanders served on No. 5 Squadron before this, but no record can be found to substantiate this. What is now known is that this Squadron was based at Risalpur in February 1941 with Hawker Audaxes, and that these Audaxes were converted to single-seat fighters when Japan entered the War. They were subsequently handed over (as fighters) to No. 146 Squadron at Dinjin in February 1942.*



A late conversion of Lysander IIIA, V9738, *for Special Duties.*
(Photos: Westland Aircraft Ltd., Neg. Nos. 6928 & 6929)



Four views of the tandem wing Lysander K6127 *taken in July 1941;* (Photos: Westland Aircraft Ltd., Neg. Nos. 1002, H1937 and 6533, and Ministry of Defence Neg. No. 10563F (close-up picture)

at Kohat for No. 28 (AC) Squadron, commanded by Sqdn. Ldr. P. N. Jennings. These Lysanders participated throughout the retreat in Burma, two aircraft (with home-made extra fuel tanks) operating from the Andaman Islands, despite attention by Japanese bombers. More damage however was caused to the Lysanders by their own bombs as several aircraft, operating from rough jungle patches, lost their bombs during take-off and were blown up.

No. 20 (AC) Squadron, also at Kohat, received fifteen Lysanders of various vintages on 31st December 1941 and immediately moved to Secunderabad, thence to Jamshedpur and Tezpur in Assam as the Burmese situation worsened (one Lysander, *P1734*, was destroyed by a direct hit by a Japanese bomb at Dinjin on 25th October 1942). No. 20's Lysanders remained in front line service and combat longer than those of any other Squadron, for they were not replaced by Hurricane IIDs until late summer of 1943. They took an active part in the relief of Imphal, using 40-pound G.P. bombs to stampede elephants being used by the enemy for freight haulage, and providing constant dusk spotting of Japanese river craft and light vehicles.

NEVER A DULL MOMENT

It is perhaps scarcely surprising that an aircraft of such singular appearance and remarkable performance as that of the Lysander should come in for more than its share of experimentation. The following summarises the more interesting trials and tribulations suffered by the design:

The Tandem Wing Lysander

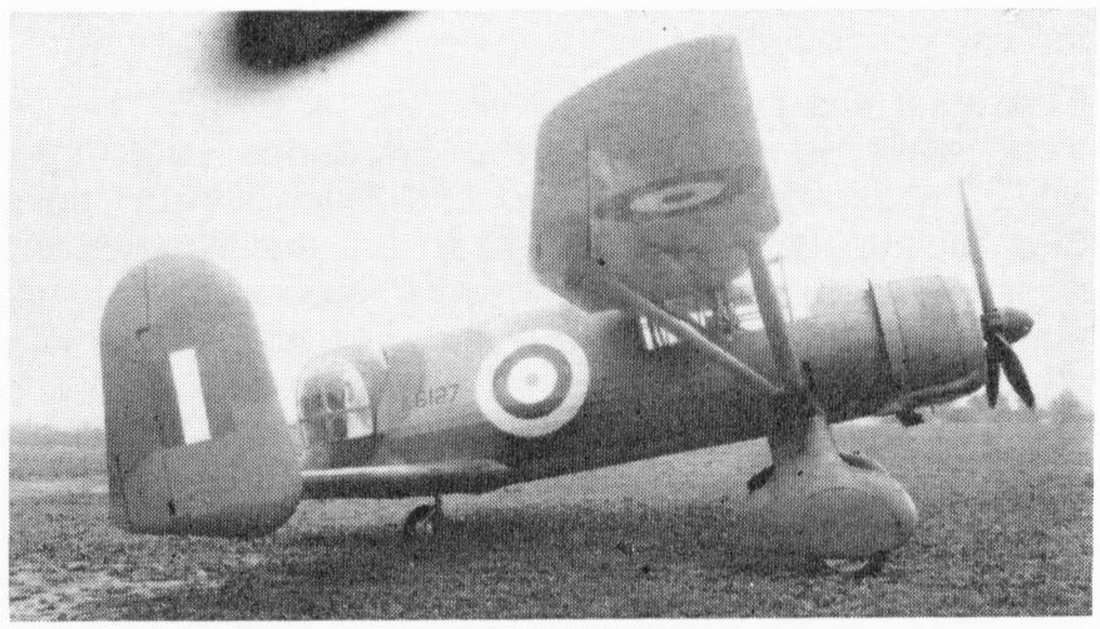
As one of a number of anti-invasion experiments to provide a beach-strafing aircraft, the first prototype Lysander, *K6127*, was provided with an entirely new rear fuselage, shortened to terminate in a power-operated four-gun Boulton-Paul turret (only a mock-up was ever carried), and supporting a wide-span tandem wing with large twin fins and rudders. Project design was undertaken at Yeovil early in 1940 but detail work and construction was transferred to Harringtons, a coach-builder at Hove. Initial flying was carried out by Harald Penrose who reported that despite considerable aft movement of the c.g. the aircraft handled extremely well.

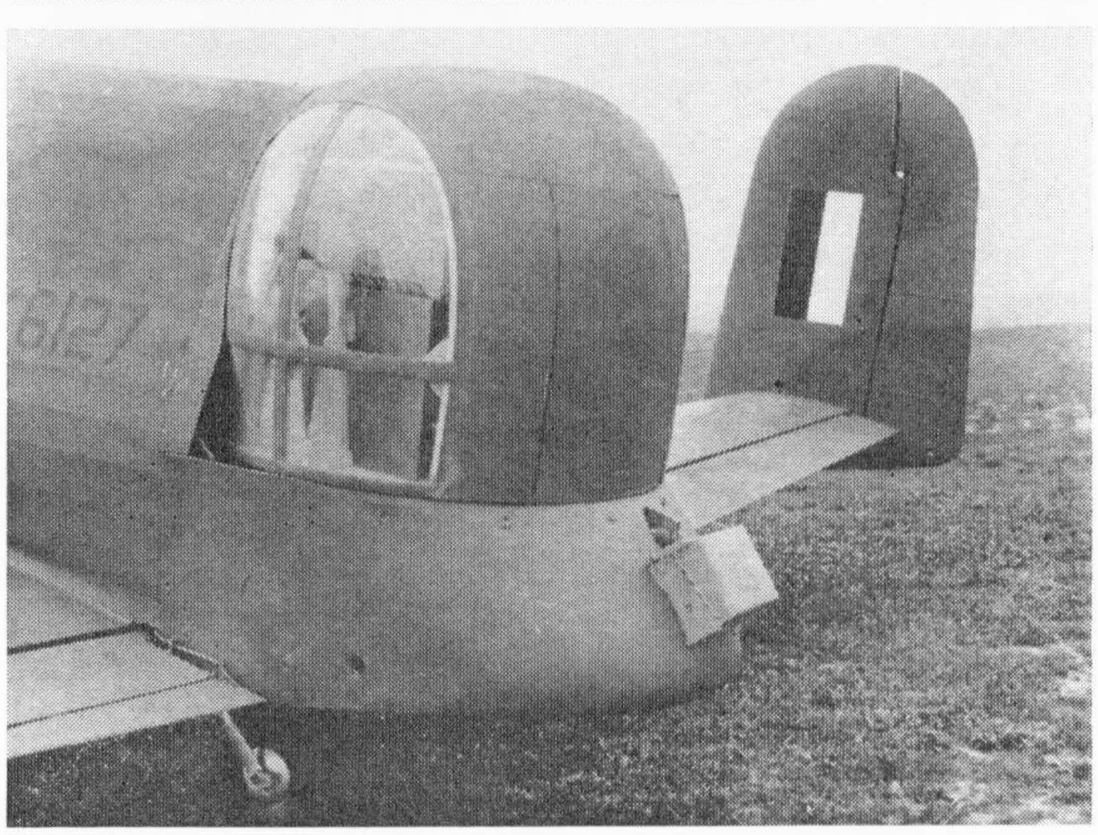
The Pregnant Perch

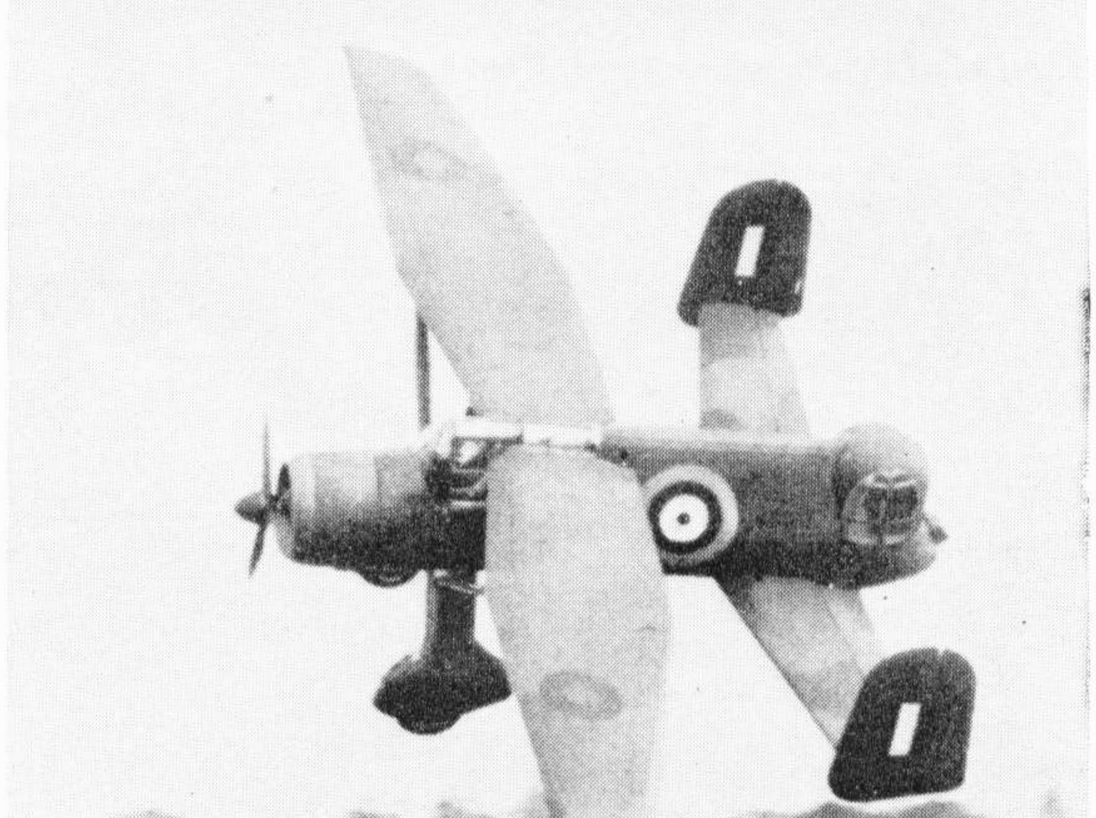
Another anti-invasion experiment was the modification of *L4673* to include a ventral gun position (also for beach-strafing). As suggested by its soubriquet, the resulting appearance was grotesque, but the experiment was in fact terminated when *L4673* suffered an engine failure, the pilot, George Snarey, escaping unhurt after a difficult uphill crash landing under high tension wires.

Midships Gun Turret

Yet another attempt to provide extra firepower was a mock-up installation of a four-gun power-operated turret immediately aft of the wing. As it was considered that the wing so restricted the field of fire,







An unarmed, tropicalised Lysander II, P9191, at Kabrit, Egypt, in 1942.
(Photo: via R. C. B. Ashworth)

this installation is believed not to have flown before it was abandoned.

Blackburn-Steiger High Lift Wing
For applied research purposes only, *P9105* was fitted with a parallel-chord, reduced-span wing by Blackburns. Full-span flaps and slats were fitted and lateral control was achieved using wing-tip spoilers. Designed about a single main spar, the wing was swept forward 9 degrees and spanned only 38 feet.

Undercarriage Experiments
One Lysander was set aside for tests covering operation from difficult landing strips. In one series of trials Dowty fitted castoring mainwheels which enabled the Lysander to complete a landing, facing into wind on an out-of-wind strip! Another installation was the fitting of a caterpillar track landing gear for use on rough strips.

Cannon-armed Lysander
Very early in the War, the Lysander prototype, *K6127*, was armed with two Oerlikon 20-mm. guns fitted above the wheel fairings to fire just clear of the airscrew arc. This was officially sponsored for use against invasion barges, but was not proceeded with after mid-1940.

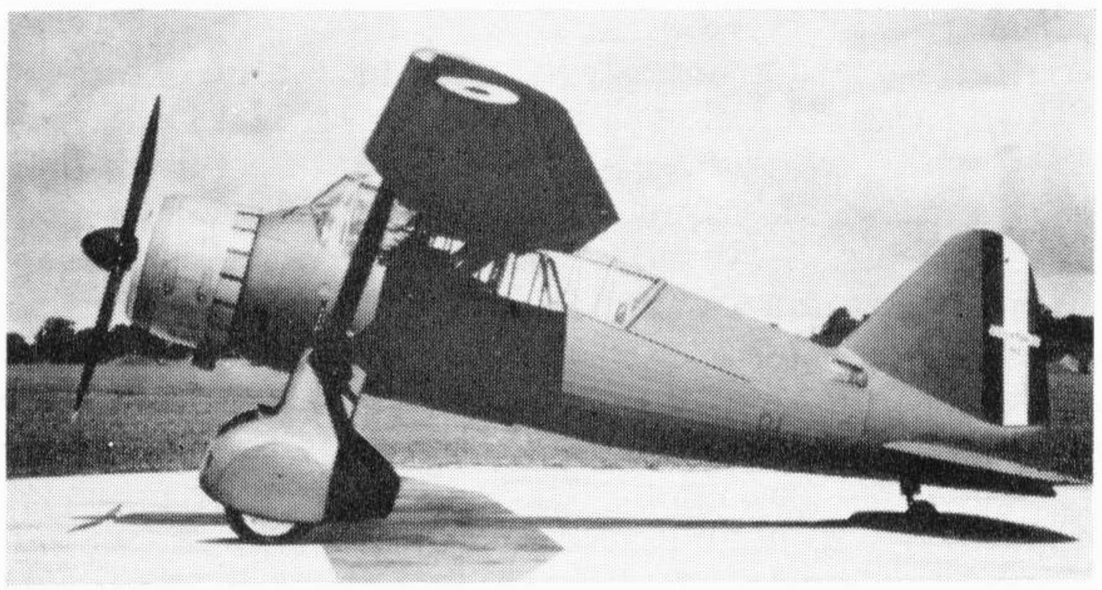
Air Brakes
One Lysander was equipped with wing-mounted bench-type airbrakes; it seems likely that these were fitted more as an aerodynamic experiment than with any particular operational benefit in mind.

LYSANDERS WITH OTHER AIR FORCES

Apart from the single French Lysander already mentioned, thirty-six Mark IIs were supplied to the Turkish Air Force in 1939, and six to the Irish Air Corps the same year.

Egypt received a total of twenty Lysanders, of which eighteen (*Y500–Y517*) were newly-built Mark Is, an ex-Air Ministry Mark I (*R2650*, which became *Y518*) and a Mark III (*R9000* whose subsequent identity is unknown). These aircraft served with No. 1 (Army Co-operation) Squadron, R.E.A.F. based at Almaza between 1940 and 1943, thereafter being relegated to target-towing duties with the same unit.

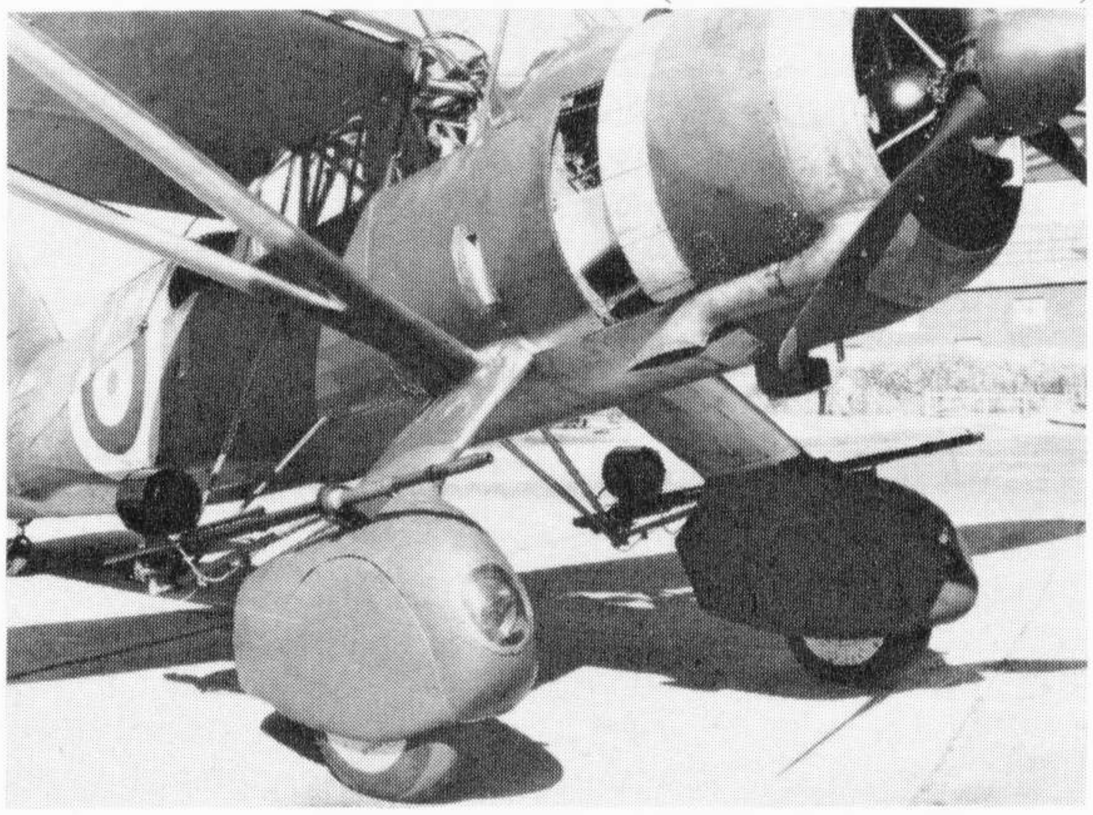
The Lysanders (believed to number nine in all *LY114–LY122*), ordered by Finland present something of an enigma. These Mark I aircraft were ferried from Yeovil by R.A.F. pilots during the summer of 1939, but as far as can be discovered never featured in the active strength returns of the *Ilmavoimat*. The aircraft were scheduled to replace Fokker C.Vs of *Lentorykmentti 1*, but there are suggestions that seven aircraft suffered forced landings during delivery and that only two aircraft had reached Finland when Russia attacked on 30th November 1939.



The sole French Lysander at Yeovil. (Photo: via Harald Penrose)

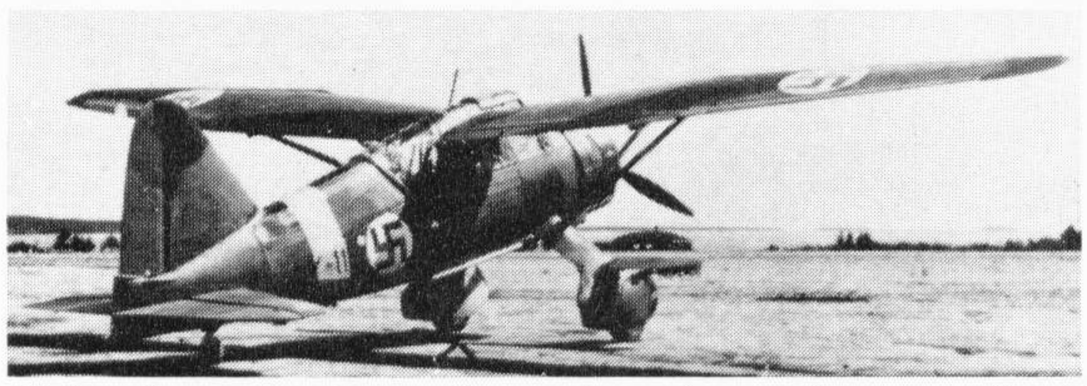
A Turkish Lysander.
(Photo: Westland Aircraft Ltd., Neg. No. 1031)

The cannon-armed Lysander prototype, K6127.
(Photo: Harald Penrose)



The end of the Pregnant Perch, L4673
(Photo: via Harald Penrose)

The Blackburn-Steiger wing on *Lysander* P9105.
(Photo: Imperial War Museum, Neg. No. MH5536)



Although apparently not featured on the combat strength, this Finnish Lysander LY116 *in Continuation War colour scheme, served on Tlelv.16.* (Photo: courtesy of Christopher Shores)

Undoubtedly the Royal Canadian Air Force flew more Lysanders than any other Air Force overseas, and following the delivery of a pattern Mark II, *R2047*, in January 1940, seventy-five Mark IIs and 150 Mark IIIs were built under licence by the National Steel Car Corporation Ltd., of Hamilton, Ontario. Apart from a very small number shipped to Britain in 1940 for service with R.C.A.F. squadrons, the great majority of Canadian Lysanders were retained in Canada for target-towing and communications duties.

Apart from large numbers of R.A.F. Lysanders shipped out to No. 2 S.F.T.S. at Pretoria and others to the S.A.A.F., and Free French Air Forces, Portugal was the only other nation to purchase these aircraft for active service, and eight were shipped to Lisbon aboard s.s. *Cumberland* in September 1943. There Lysander IIIAs, *V9506*, *V9583* and *V9741*, were allocated to the U.S. Army Air Force, it is believed for evaluation purposes.

By the end of the War the Lysander was a rarity—except in Canada where relatively large numbers persisted until the early 'fifties, and even in the 'sixties several are known to exist, though probably these are not airworthy. Truly it could be said that the Lysander had been a maid of all works—and a master of many!

The Lysander fitted with bench-type airbrakes.
(Photo: via Harald Penrose)

PRODUCTION SUMMARY

Westland P.8 Lysander prototypes (Specification A.39/34). Two prototypes, *K6127* (first flown 15/6/36) and *K6128* (first flown 11/12/36). *K6127*, after being brought up to production standard, was experimentally fitted with two 20 mm. Oerlikon guns on the undercarriage in 1940, and later modified with tail (dummy) turret and de Lanne tandem wing. *K6128* to Middle East and India for tropical trials, 1938-39.

Westland Lysander I (Specification A.36/36). 169 aircraft with 890 h.p. Bristol Mercury XII engines. *L4673–L4738*, *P1665–P1699*, *R2572*, *R2575–R2600*, *R2612–R2652*. *R2650* to Royal Egyptian Air Force. Converted to T.T.Is: *R2572*, *R2575*, *R2578*, *R2581*, *R2587*, *R2588*, *R2589*, *R2591*, *R2593*, *R2594*, *R2597*, *R2598*, *R2632*, *R2638*. Converted to T.T.IIIs: *P1666*, *P1668*, *P1680*, *P1681*, *P1683*, *R2651*, *R2652*.

Westland Lysander II. 442 aircraft with 905 h.p. Bristol Perseus XII engines. *L4739–L4816*, *L6847–L6888*, *N1200–N1227*, *N1240–N1276*, *N1289–N1320*, *P1711–P1745*, *P9051–P9080*, *P9095–P9140*, *P9176–P9199*, *R1987–R2010*, *R2025–R2047*: also *3101–3136* of the Turkish Air Force, *61–66* of the Irish Air Corps, and "*01*" of l'Armée de l'Air. *L4798*, *L6869*, *N1208*, *N1245*, *N1300*, *P1713*, *P1735*, *P1736*, *P1738*, *P9059*, *P9078*, *P9102*, *P9103*, *P9134*, *P9181*, *P9184*, *R2036*, *R2039*, *R2040*, *R2043*, *R2045*, *R2046* transferred to the Free French Forces. *P9105* fitted with Blackburn-Steiger high-lift wing. Modified to T.T.IIs: *L6867*, *N1289*, *N1320*, *P9099*, *R1998*. Converted to T.T.IIIs: *N1289*, *N1320*, *P1715*, *P9109*, *P9110*, *P9111*, *P9113*, *P9114*, *P9115*, *P9117*, *P9123*, *P9125*, *P9126*, *P9128*, *P9130*, *P9133*. *R2047* as pattern aircraft to Canada, 1/40.

Westland Lysander II (Canadian licence-built). 75 aircraft with 905 h.p. Bristol Perseus XII engines. *416–490* (*438–440* became *DG445–DG447*).

Westland Lysander III. 100 aircraft with 870 h.p. Bristol Mercury XX engines. *R8991–R9030*, *R9056–R9079*, *R9100–R9135*. *R8991–R8999* to Finland; *R9000* to Egypt.

Westland Lysander III. 250 aircraft with 870 h.p. Bristol Mercury XX engines. *T1422–T1470*, *T1501–T1535*, *T1548–T1590*, *T1610–T1655*, *T1670–T1709*, *T1735–T1771*. Converted to T.T.IIIs: *T1445*, *T1450*, *T1453*, *T1456*, *T1458*, *T1461*, *T1532*, *T1534*, *T1571*, *T1583*, *T1616*, *T1623*, *T1626*, *T1633*, *T1642*, *T1674–T1679*, *T1688*, *T1692*, *T1699*, *T1746*, *T1750*, *T1752*, *T1763*. To Admiralty charge: *T1570* as T.T.III; *T1739* used for B.O.A.C. crew training.

Westland Lysander III. 17 aircraft built by Westland (Doncaster) Ltd. *W6939–W6945*, *W6951–W6960*. A further 483 aircraft between *W6675* and *W6938*, and between *W6961* and *W7241* were cancelled.

Westland Lysander III (Canadian licence-built). 150 aircraft with 870 h.p. Bristol Mercury 30 engines. *2305–2454*.

Westland Lysander IIIA. 347 aircraft with 870 h.p. Bristol Mercury 30 engines. *V9280–V9329*, *V9347–V9386*, *V9401–V9450*, *V9472–V9521*, *V9538–V9557*, *V9570–V9619*, *V9642–V9681*, *V9704–V9750*. *V9506*, *V9583* and *V9741* to U.S. Army Air Force. *V9614* supplied to Free French Forces. *V9372*, *V9579*, *V9679* and *V9726* converted to tow gliders. Supplied to Portugal: *V9309*, *V9321*, *V9363*, *V9439*, *V9555*, *V9594*, *V9705*, *V9729*.

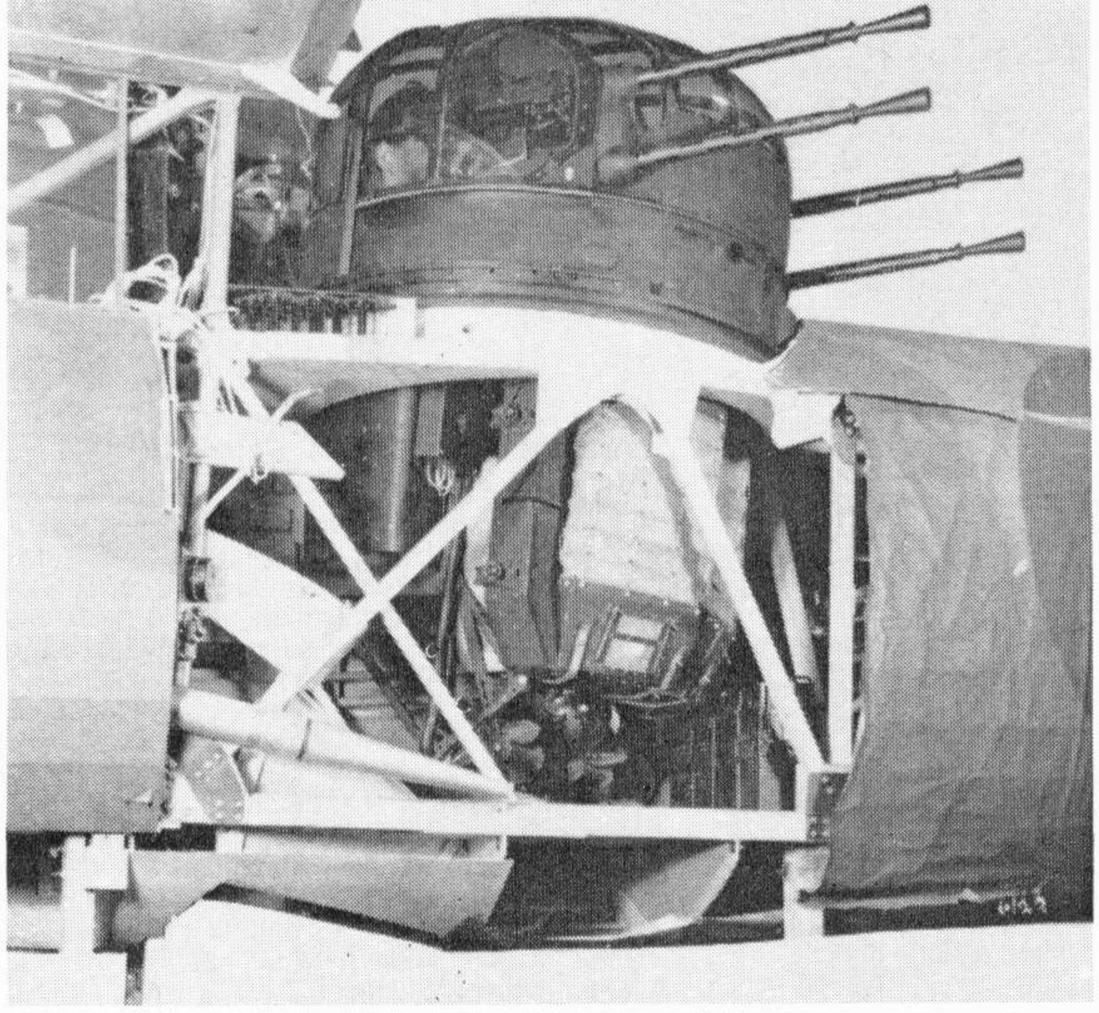
Westland Lysander T.T.IIIA. 100 aircraft with 870 h.p. Bristol Mercury 30 engines. *V9751–V9753*, *V9775–V9824*, *V9844–V9868*, *V9885–V9906*.

(*Total Lysander production*: 2 prototypes plus 1,650 production aircraft).

REPRESENTATIVE AIRCRAFT IN SQUADRON SERVICE

Lysanders are known to have served on the following Squadrons and other units; in many instances they may have only performed second line duties (i.e. communications). The unit code letters shown on the following page are those carried by the unit at the time that Lysanders were on the strength, but they were not necessarily applied to this aircraft.

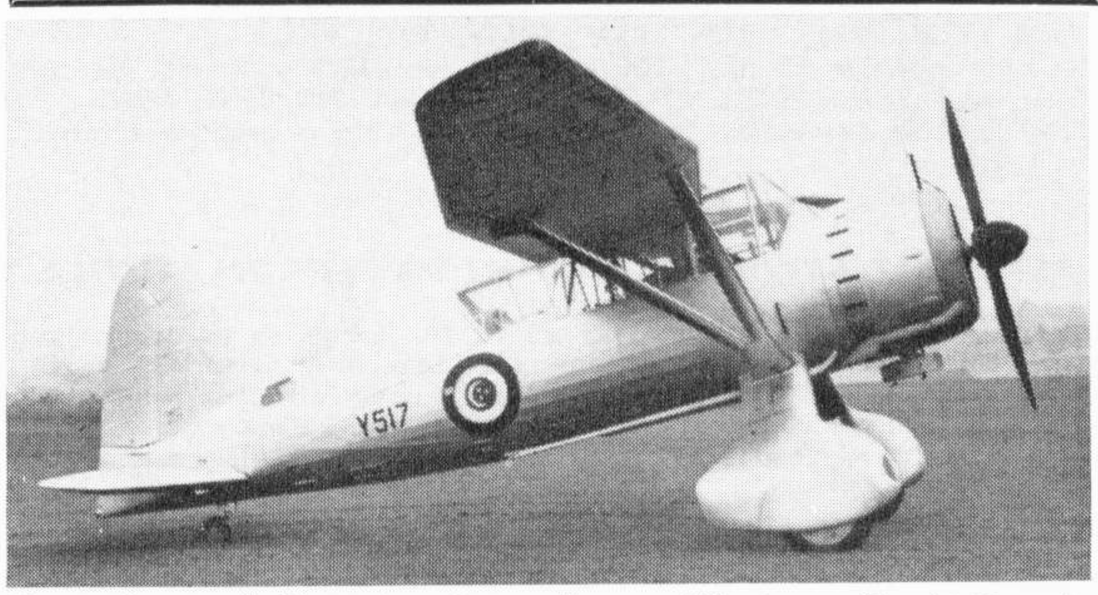
Close-up of the Dowty castoring undercarriage trial installation.
(Photo: Westland Aircraft Ltd., Neg. No. 6093)



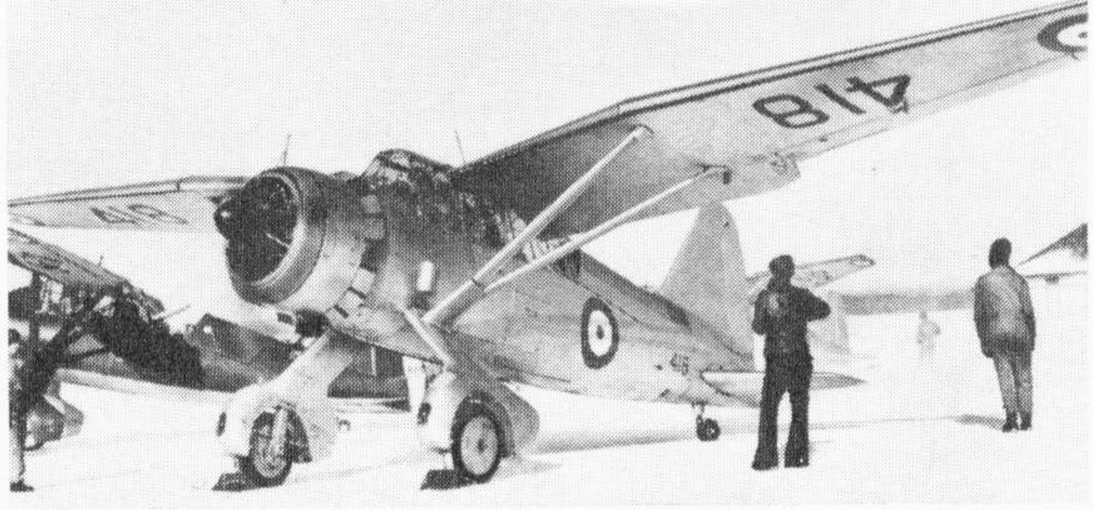
Mock-up of the midships Boulton Paul four-gun turret. Access was gained through the bottom of the fuselage.
(Photo: Westland Aircraft Ltd., Neg. No. 6129)

Before 3rd September 1939	No. 208 Sqdn., (Code unknown)
No. 2 Sqdn., KO-	No. 225 Sqdn., (Code unknown)
No. 4 Sqdn., TV-	No. 237 Sqdn., (Code unknown)
No. 13 Sqdn., AN-	No. 239 Sqdn., HB-
No. 16 Sqdn., KJ-	No. 241 Sqdn., RZ-
No. 26 Sqdn., HL-	No. 268 Sqdn., NM-
	No. 275 Sqdn., PV-
After 3rd September 1939	No. 276 Sqdn., AQ-
No. 2 Sqdn., KO-	No. 277 Sqdn., BA-
No. 4 Sqdn., FY-	No. 278 Sqdn., MY-
No. 6 Sqdn., JV-	No. 280 Sqdn., MF-
No. 13 Sqdn., OO-	No. 287 Sqdn., KZ-
No. 16 Sqdn., UG-	No. 309 Sqdn., (Code unknown)
No. 20 Sqdn., HN-	No. 357 Sqdn., (Code unknown)
No. 26 Sqdn., RM-	No. 400 Sqdn., SP-
No. 28 Sqdn., (Code unknown)	No. 414 Sqdn., RU-
No. 116 Sqdn., II-	No. 613 Sqdn., (Code unknown)
No. 135 Sqdn., (Code unknown)	No. 614 Sqdn., (Code unknown)
No. 138 Sqdn., AC-	No. 2 Sqdn., R.C.A.F., AE-
No. 139 Sqdn. *	No. 110 Sqdn., R.C.A.F., SP-
No. 148 Sqdn. *	No. 112 Sqdn., R.C.A.F., AE-
No. 161 Sqdn., MA-	No. 118 Sqdn., R.C.A.F., VW-
No. 10 Operational Training Unit, UY-	
No. 54 Operational Training Unit, YX-	
School of Army Co-operation, LX-	

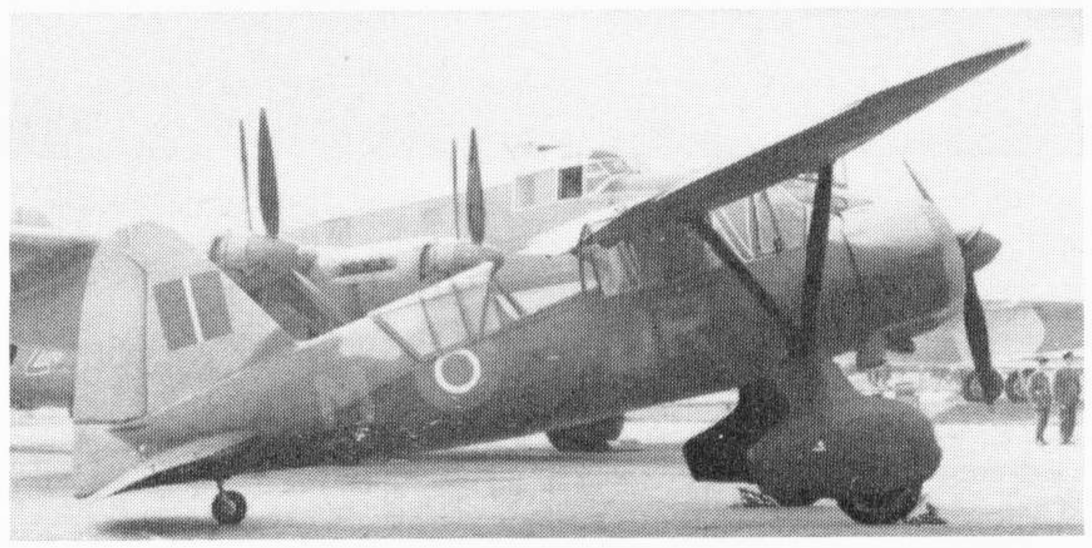
* *Quoted on doubtful authority.*



Two views of Egyptian Lysanders. (Photos: Capt. Razek, R.E.A.F. and Westland Aircraft Ltd., via Harald Penrose)



Canadian Lysanders in silver and camouflage finishes. It is believed that all Canadian examples were flown without wheel discs to eliminate the danger of frozen snow and ice locking the mainwheels.
(Photo: Imperial War Museum, Neg. No. CAN437)



Believed to be the sole remaining Lysander in a presentable condition in Britain, albeit grounded. Apart from the serial, R9125, *the markings are thought to be bogus and the paint scheme inaccurate.* (Photo: R. C. B. Ashworth)

No. 2 (AC) Sqdn., Hawkinge and Drucat, France, 1939: *L4687, L4692–L4696, L4699, L4700, L4704, L4705;* reinforcements, Drucat, 1/40: *L4816, L6847, L6848, N1242, N1259, N1262;* Hawkinge, 1940: *L4776, N1268, P1727, P9067, P9107, P9132.*

No. 4 (AC) Sqdn., Wimbourne and Mons-en-Chaussée, France, 11/39: *L4745, L4746, L4748, L4754, L4814, L6852;* Monchy Lagache, France, 1/40: *N1257, N1274, P9061, P9062;* Lille-Ronchin, Belgium, 5/40: *L4742* (shot down by enemy troops, 14/5/40), *L4752* (P/O Langley and L.A.C. Gillham shot down one Bf 110, Lille, 16/5/40), *L4755, N1257, N1274, P1711, P1733, P9064; L4745* (shot down on recce., 15/5/40); Linton-on-Ouse, 6/7/40: *N1204, N1205* (crashed, 16/7/40), *N1300, P1734, P9061, P9062, P9108, R1990, R2025, R2026, R2031* (crashed, 16/7/40), *R2040, R2042;* Clifton, Yorks, 11/40: *R9013, R9028, R9029, R9075, R9078, R9100, R9118;* Clifton, 5/42: *V9426, V9427, V9438, V9440, V9449, V9556, V9606, V9676;* last Lysanders on strength, 6/42: *T1699, V9485, V9587.*

No. 6 (AC) Sqdn., Ramleh, Palestine, 1940: *L6874–L6876, L6877* (shot down by A.A. fire, Maddalena, 14/12/40), *L6878–L6881, L6882* (crashed, 11/4/40), *L6883, L6884, L6887, L6888* (crashed, 3/6/40); coastal recce., Palestine, 11/40: *L4725* (armoured); watch on illegal immigrants, 12/40: *P9189* (long range tanks); seige of Tobruk, 1941: *L4739, N1307, P1676, P1740.*

No. 13 (AC) Sqdn., Odiham and Mons-en-Chaussée, France, 1939: *L4758–L4760, L4763–L4768, L4771, L4772, L4812, N1219, N1220, N1223, N1260;* Warmwell, air-sea rescue, 9/40: *T1453, T1556, T1620, T1621.*

No. 16 (AC) Sqdn., Old Sarum and Lympne, 1938-40: *L4793* (P/O Dexter and A.C. Webb destroyed two Bf 109Es, Arras, 21/5/40), *L4794, L4795, L4796* (missing in St. Quentin area, 17/5/40), *L4798, L4801–L4805, L4806* (F/O Weston-Burt and Cpl. Barlow destroyed Hs 126, St. Quentin, 18/5/40), *L4813, P1669, P1685, P1720* (attacked by Spitfires, 27/5/40; gunner killed but aircraft returned home); Western Zoyland, air-sea rescue, 10/40: *P9110, R9014, R9016, R9018, R9019, R9059, R9107, T1551, T1585, T1705;* 5/41: *V9296* (successful rescue of 5-man Whitley crew, Roborough, 30/4/41), *V9356, V9551.*

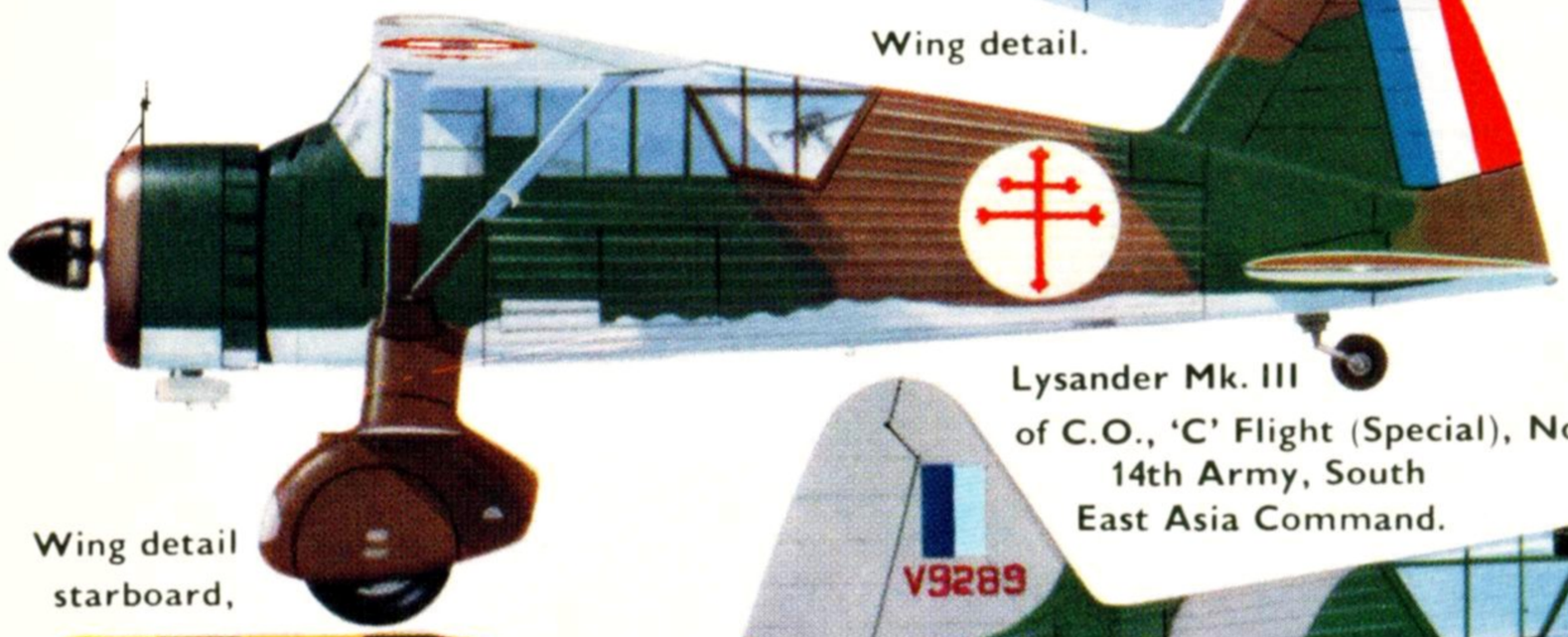
No. 20 (AC) Sqdn., Secunderabad, Jamshedpur and Tezpur, India, 1/42: *L4776, L4815, L6886, N1217* (crashed, 27/4/42), *N1270, N1312, N1314, P9067, P9076, P9107, R1991* (crashed, 19/7/42), *R2026*; Dinjin, 10/42: *P1734* (destroyed by Japanese bombers, 25/10/42).

No. 26 (AC) Sqdn., Catterick, Yorks, and Le Plessiel, France, 9-10/39: *L4770, L4771, L4773–L4778, L4782, L6854, N1202, N1203, N1218, N1290;* returned from Dieppe to Lympne, 4/40: *L4761* (missing, 1/6/40), *L4780, L4785, N1275, N1211* (missing, 4/6/40), *N1253* (missing, 1/6/40), *P9107*; West Malling, 6/9/40: *L4776, L4778, L4780, P1714, P9067, P9107, P9132, R2029, R2030, R4859; N1267* (crashed 27/8/40); Gatwick, 9/40–2/41: *R9060, R9105, R9108, T1429* (target tug), *T1430, T1437, T1449.*

No. 116 (Calibration) Sqdn., Hatfield and Hendon, 1941-43: *L4776* (1941, loaned by No. 268 Sqdn.), *P9111, T1528* (from No. 2 Sqdn.), *T1463, T1565, T1633, T1651, T1652, T1672, T1676–T1679, T1701–T1704, T1706.* No. 208 (AC) Sqdn., Qasaba, Egypt, 6/40: *L4677* (first squadron sortie of war flown by P/O Hardiman), *L4679, L4680, L4689, L4690, L4711, L4712, L4717, L4719, L4724, L4726, L4728, L4731;* Sidi Barrani, 6/41: *P9124.*

Lysander Mk. II of Free French Air Force; support aircraft with Gen. Leclerc's Free French Saharan forces, 1941-42.

Wing detail.



Cross of Lorraine.

Free French A.F.; four wing positions.

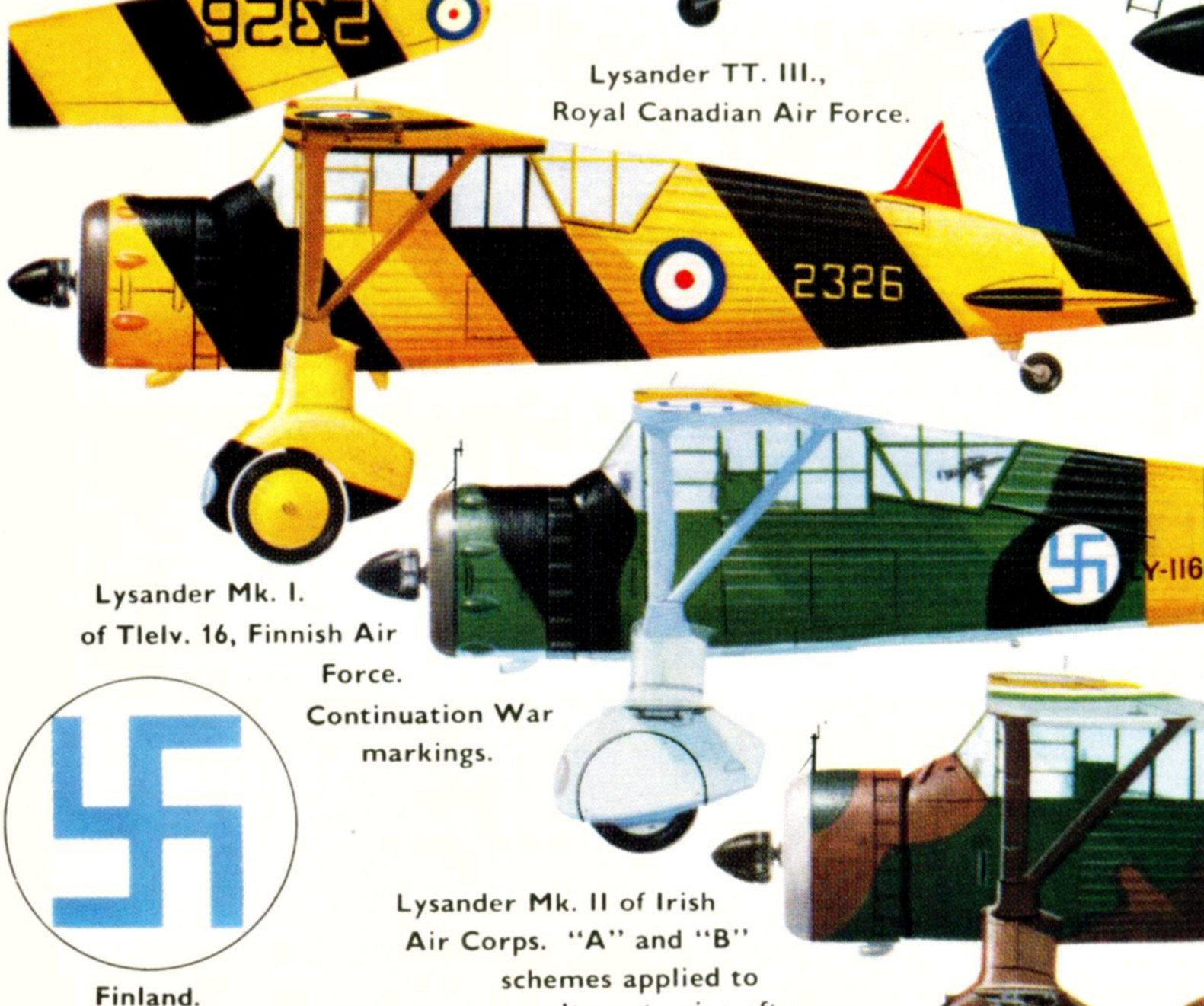
Lysander Mk. III of C.O., 'C' Flight (Special), No. 357 (SD) Sqdn., attached to 14th Army, South East Asia Command.

Wing detail starboard,

port.

Personal 'spider' insignia on S.E.A.C. roundel.

Lysander TT. III., Royal Canadian Air Force.



Campaign insignia (Burma).

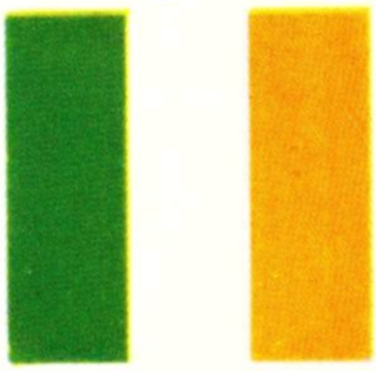
Lysander Mk. I. of Tlelv. 16, Finnish Air Force. Continuation War markings.

Eire.

Finland.

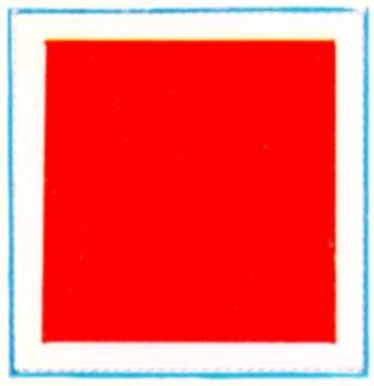
Lysander Mk. II of Irish Air Corps. "A" and "B" schemes applied to alternate aircraft.

Lysander Mk. II of Turkish Air Force.



Eire; four wing positions.

Turkey, rudder.



Turkey, wings.

Egypt.

Lysander Mk. I of Egyptian Air Force.

© WARD

All six Irish Air Corps Lysanders lined up at Yeovil.

(Photo: Westland Aircraft Ltd., Neg. No. 5987)

Other R.A.F. Squadrons: No. 89 Sqdn., 10/41: *V9369;* No. 161 (Special Duties) Sqdn., Tangmere and Tempsford: *R9106* (12/42), *V9353* (7/42), *V9375* (8/44), *V9405* (missing 3/3/44); No. 225 Sqdn., 9/40: *R9076;* No. 231 Sqdn.: *P1673* (8/40), *T1573* (12/43); No. 241 Sqdn.: *R2026* (9/40), *T1581* (12/40); No. 268 Sqdn.: *N1319;* No. 276 Sqdn.: *V9310* (12/41); No. 277 Sqdn.: *P1684* (4/42); No. 287 Sqdn.: *P1688* (12/41); No. 289 Sqdn.: *P9099* (lost at sea, 8/1/43), *P9104;* No. 296 Sqdn., *V9316* (6/42); No. 309 (Polish) Sqdn.: *T1550* (1/41), *V9385* (5/42); No. 400 Sqdn., *V9373* (10/41); No. 598 Sqdn., *N1210* (12/43); No. 613 Sqdn., A.A.F., 4/40: *L4792;* No. 614 Sqdn., 5/40: *L6851.*

Lysanders transferred to the Fleet Air Arm on Admiralty Charge, 1942: *V9349, V9360, V9372, V9410, V9574.*

Lysanders sold to Portugal, 9/43, shipped in s.s. *Fort Cumberland: V9309, V9321, V9363, V9439, V9555, V9594, V9705, V9729.*

Other aircraft: *N1310, N1311, N1316, N1317* (School of Army Co-operation); *DG444* (became R.C.A.F. *437*, No. 112 Sqdn., R.C.A.F., 7/40); *N1250* (No. 6 A.A.C.U., 1/42); *N1210* (No. 1492 Flt., 10/42; No. 1630 Flt., 9/43; No. 598 Sqdn., 12/43); *P9078, P9134, P9181, P9184, R2036* (transferred to Free French Air Force, 1/42); *V9614* (presented to Free French Memorial, 1945); *L4732* (T.T. Mk. I lost at sea in s.s. *Kalewa*, ex-Glasgow, 3/6/42); *V9514, V9617* (both lost at sea in s.s. *Meliskirk en route* for Madagascar ex-Liverpool, 24/11/42).

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SPECIFICATION

	Lysander I	Lysander II	Lysander III
Type	High-wing strut-braced monoplane with fixed undercarriage		
Powerplant	One 890 h.p. Bristol Mercury XII 9-cylinder air-cooled radial supercharged engine driving 11 ft. dia. 2-pitch D.H. 3-blade propeller.	One 905 h.p. Bristol Perseus XII 9-cylinder air-cooled radial supercharged sleeve-valve engine driving 11 ft. dia. 2-pitch D.H. 3-blade propeller.	One 870 h.p. Bristol Mercury XX or 30 9-cylinder air-cooled radial supercharged engine driving 11 ft. dia. D.H. 3-blade propeller.
Armament	Two fixed Browning 0·303-inch machine guns mounted in wheel spats above the main wheels, each with ammunition supply of 500 rounds. One free Lewis Mk. IIIG or Mk. IIIE 0·303-inch machine gun on Fairey mounting in rear cockpit with eight 97-round drums and Mk. I reflector sight (Mk. III aircraft had two Browning guns on rear mounting; Mk. III(SD) and IIIA(SD) had guns removed). With detachable stub wing bomb carriers fitted, and using the rear fuselage racks, sixteen 20-lb. ME Mk. I bombs, Mk. II practice smoke bombs or Mk. I aircraft reconnaissance flares could be carried. Alternatively four Mk. VII 112-lb. or 120-lb. G.P. bombs, or two 250-lb. bombs, or two smoke generator canisters, supply droppers (Mk. VB) or 25-lb. incendiary bomb canisters.		
Dimensions:			
Wing Span	50 ft. 0 in.	50 ft. 0 in.	50 ft. 0 in.
Length	30 ft. 6 in.	30 ft. 6 in.	30 ft. 6 in.
Height	14 ft. 6 in.	14 ft. 6 in.	14 ft. 6 in.
Wing area	260·0 sq. ft.	260·0 sq. ft.	260·0 sq. ft.
Tailplane span	12 ft. 6 in.	12 ft. 6 in.	12 ft. 6 in.
Wing dihedral	3 degrees	3 degrees	3 degrees
Wheel track	9 ft. 9 in.	9 ft. 9 in.	9 ft. 9 in.
Capacities:			
Fuel	95 Imp. gal.	95 Imp. gal.	95 Imp. gal.
Oil (actual)	9 Imp. gal.	9 Imp. gal.	9 Imp. gal.
Weights:			
Empty	4,065 pounds	4,160 pounds	4,365 pounds
Loaded	5,920 pounds	6,015 pounds	6,318 pounds
Performance:			
Max. Speeds—			
Sea Level	211 m.p.h.	206 m.p.h.	209 m.p.h.
5,000 feet	215 m.p.h.	221 m.p.h.	212 m.p.h.
10,000 feet	219 m.p.h.	230 m.p.h.	207 m.p.h.
15,000 feet	218 m.p.h.	224 m.p.h.	196 m.p.h.
Minimum speed at A.U.W. ...	54 m.p.h.	55 m.p.h.	56 m.p.h.
Climb to—			
5,000 feet	3·4 minutes	3·3 minutes	4·1 minutes
10,000 feet	6·9 minutes	6·9 minutes	8·0 minutes
15,000 feet	11·9 minutes	11·5 minutes	13·9 minutes
20,000 feet	20·5 minutes	19·7 minutes	28·7 minutes
Service Ceiling	26,000 feet	26,000 feet	21,500 feet
Take-off run to 50 feet	250 yards	245 yards	305 yards
Landing run from 50 feet ...	310 yards	330 yards	340 yards
Miscellaneous Equipment	Rotax electric starter. Self-sealing fuel tank between cockpits. Dowty internally-sprung wheels with Dunlop pneumatic brakes. Dunlop Ecta tailwheel. Two 750-litre oxygen bottles for crew members. Target tugs had electrically-driven triple-drum winch mounted above fuel tank.		

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